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Copyright (c) 1993 - 2004
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#### ALIGNMENTS

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The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder,

capable

Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder.

Claim 4; Page 52; 66pp; English.

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CC specification. However it differs at a single position XX X SQ Sequence 105 AA;

Query Match
Best Local Similarity 100.0%; Pred. No. 4.8e-39;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 GPETLCGAELVDALOFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60

Db 1 GPETLCGAELVDALOFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60

OY 61 CVRCKPTKSARSIRAQRHTDMPKTOK 86

Db 61 CVRCKPTKSARSIRAQRHTDMPKTOK 86

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                              nucleic acid is stated as l (AAE02451) of
                                toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, epripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is alternative version of rat liver-type IGF-I isoform (I.IGF-I). The L.IGF-I protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4 and 6. Note: The present sequence is stated as being the same as SEQ ID NO: 12 shown in sequence listing (AAE02451) of the specification. However it differs at a single position
                                                                                                                                                                                               rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
                                                                                                                                                                                                                                                                                                      The present invention relates to use of mechano-growth factor (MGF), as Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capal of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IGF-I isoform;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; myelitis; post-polio syndrome; toxin; motoneurone disorder; damage; autosomal muscular dystrophy; diabetic neuropathy; inked muscular dystrophy; peripheral neuropathy; inked muscular dystrophy; peripheral neuropathy; imer's disease; Parkinson's disease; liver; L.IGF-I.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Insulin-like Growth Factor-I; MGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  neurological disorder; neurodegenerative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (L.IGF-I) protein, alternative version
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                                                                                                                                                                                                                                   progressive
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                                                             The present invention relates to use of mechano-growth factor (MGF), an C Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable CC medicament for the treatment of neurological disorder. The MGF is capable CC reducing motoneurone loss by 20% or greater in response to nerve CC avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polymucleotide and polypeptide are useful in the CC manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive Spinal muscular atrophy, infantile or juvenile muscular atrophy, cC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a ctoxin, motoneurone trauma, a motoneurone lesion or nerve damage, an CC injury that affects motoneurones, motoneurone loss associated with aging, CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is rat liver-type IGF-I isoform (L.IGF-I). The L.IGF-I corrections and contains and decrease accorded by motoneurone and decrease.
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present sequence is rat liver-type LGF-1 150-1001. Which is equence protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4 and 6. Note: The present sequence (SEQ ID NO: 12) is eraimed as being the same as that shown in figure 9 (AAE02531) of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rat; IGF-I isoform; Insulin-like Growth Factor-I;
mechano-growth factor; neurological disorder; neur
                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 58-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goldspink
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                                                                                                                                      The invention relates to the use of an insulin-like growth factor I (IGF I) isoform, known as mechano-growth factor (MGF), in the manufacture of medicament for treating nerve damage in the peripheral nervous system, o for treating nerve damage by localising MGF at the site of damage. The nerve damage may include severing of a nerve. The treatment may be combined with another treatment (such as a polypeptide growth factor other than MGF) that prevents or diminishes degeneration of the target organ (for example, muscle) which the damaged nerve innervates, whereby the treatment of the muscle with MGF or a polypucleotide encoding MGF prevents or diminishes degeneration. The method is useful for treating neurological disorders, preferably motorneuron disorders. These methods can reduce motoneuron loss by 20% or greater in response to nerve avulsion. This sequence represents the human MGF polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Use of insulin-like growth factor-I (IGF-I) isoform known as mechano growth factor which is encoded by IGF-I exons 4,5,6 and has ability to reduce motoneurone loss in response to nerve avulsion, to treat nerve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAU10559
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 11; Fig 5; 65pp; English.
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                                                                                     Sequence
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DB; AAS16877.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mechano-growth factor; insulin-like growth factor I; IGF-I; MGF;
rotective; nerve damage; peripheral nervous system; nerve severing;
; neurological disorder; motoneuron loss; motorneuron disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UNIV COLLEGE LONDON
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Pred. No. 2.4
Score 494.5; DB 5;
Pred. No. 2.4e-41;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
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GPETICGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY

60

60

Query Match Best Local S

Similarity

82.6%;

Conservative

2

Score 494.5; DB 7; Pred. No. 2.4e-41; 2; Mismatches 13;

110; 1.

Gaps

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RESULT 13
ABR637
ABR637
AC ABR63
AC ABR
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                                                          The present sequence is that of the C-terminal end of novel human mechano growth factor (MGF), encoded by exons 3-6 of the IGF-I gene. MGF is a splice variant and non-liver type isoform of insulin-like growth factor (IGF-I) that is activated in response to cardiac tissue damage and which has a repair function in the ischaemic and/or overloaded heart. The human MGF transcript has a 49 base insert in the 3 domain that alters the reading frame and hence the C-terminal end of MGF protein in comparison with other IGF-I splice variants. The invention provides use of a MGF polypeptide or polynucleotide in the manufacture of a medicament for the prevention or limiting too the heart by preventing or limiting apoptosis in the myocardium. The MGF polypeptide, polynucleotide or medicament is also useful for administration in response to a heart attack
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Use of Mechano Growth Factor polypeptide or polynucleotide for preventing or limiting apoptosis in the myocardium, particularly for preventing or limiting myocardial damage in response to ischemia or mechanical overload of the heart.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABR63167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 5; Fig 7; 74pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goldspink G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-FEB-2002; 2002GB-00002906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-FEB-2003; 2003WO-GB000537
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            splice variant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mechano growth factor; MGF; insulin-like growth factor 1; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human mechano growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-DEC-2003
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   Sequence 110 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (UNIO ) UNIV COLLEGE LONDON.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goldspink P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cardiant; vasotropic; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
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RESULT 10
AAW23301
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
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apoptosis i
medicament
               A use of insulin like growth factor I (IGF-1) has been developed, and is characterised by the presence of the Ec peptide, or a functional equivalent, in the treatment or therapy of a human or animal. The IGF-1 polypeptide can be used to treat muscular disorders, e.g. Duchenne or Becker muscular dystrophy, autosomal dystrophies and related progressive skeletal muscle weakness and wasting, muscle atrophy in ageing humans, spinal cord injury induced muscle atrophy and neuromuscular diseases, and cardiac disorders, e.g. diseases where promotion of cardiac muscle protein synthesis is a beneficial treatment, cardiomyopathies and acute heart failure or insult, specifically myocarditis or myocardial infarction. It can also be used to promote bone fracture healing and maintenance of bone in old age. The present sequence represents rabbit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI;
                                                                                                                                                                                                                                                                                                                                               Disclosure; Fig 3; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                      peptide -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goldspink
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-SEP-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      neuromuscular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Insulin like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rabbit insulin like growth factor 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAW23301;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UNLO ) ROYAL
                                                                                                                                                                                                                                                                                                                                                                                         of insulin like growth factor I characterised by presence of Ectide - to treat humans or animals, particularly muscle disorders rt conditions or neuromuscular diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1997-470877/43
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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in the present specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mechanical overload of the heart by preventing or limiting the myocardium. The MGF polypeptide, polynuclectide or s also useful for administration in response to a heart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      growth factor 1; IGF-1; Ec r disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FREE HOSPITAL SCHOOL MED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96GB-00005124.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97WO-GB000658.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 512; DB 7;
Pred. No. 4.4e-43;
3; Mismatches 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                peptide; muscle disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 111;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   heart;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
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맑 Ś 뮍 Š

Query Match

. 54

Score

512;

DB 2

Length 121;

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Best Local Similarity
Matches 96; Conserv
           toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is human IGF-I isoform MGF. MGF is a muscle isoform having extracellular (Ec) domain, hence also referred as IGF-I-Ec. The MGF protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame of MGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease.
                                                                                                                                                               avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polymucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder including a disorder of motoneurones and/or neurodegenerative disorder. e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progress; spinal muscular atrophy, infantile or juvenile muscular atrophy progress; spinal muscular atrophy.
                                                                                                                                                                                                                                                                          The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-[(GF-1)] is the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone avulsion, and effects motoneurone rescue, preferably adult motoneurone
                                                                                                                                                                                                                                                                                                                                                                                         Claim
                                                                                                                                                                                                                                                                                                                                                                                                                           Use of mechano-growth factor, an isoform of Insulin-like capable of reducing motoneurone loss, in the manufacture for the treatment of neurological disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goldspink G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-MAY-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-AUG-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAE02447 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (DNIO ) UNIV
                                                                                                                                                                                                                                                                                                                                                                                           4; Page 50-51; 66pp;
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RESULT 8
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The invention relates to the use of an insulin-like growth factor I (IGF-I) isoform, known as mechano-growth factor (MGF), in the manufacture of a medicament for treating nerve damage in the peripheral nervous system, or for treating nerve damage by localising MGF at the site of damage. The
                                                                                                                                                                                                                                         Use of insulin-like growth factor-I (IGF-I) isoform known as mechano growth factor which is encoded by IGF-I exons 4,5,6 and has ability to reduce motoneurone loss in response to nerve avulsion, to treat nerve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rabbit; mechano-growth factor; insulin-like growth factor I; IGF-I; MGF; neuroprotective; nerve damage; peripheral nervous system; nerve severing; muscle; neurological disorder; motoneuron loss; motorneuron disorder;
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Pred. No. 4.4e-43;
3; Mismatches 12
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The present sequence is that of the C-terminal end of novel rabbit mechano growth factor (MGF), encoded by exons 3-6 of the IGF-I gene MGF is a splice variant and non-liver type isoform of insulin-like growth factor (IGF-I) that is activated in response to cardiac tissue damage and which has a repair function in the ischaemic and/or overloaded heart. The rabbit MGF transcript has a 52 base insert in the E domain that alters the reading frame and hence the C-terminal end of MGF protein in comparison with other IGF-I splice variants. The invention provides use of a MGF polypeptide or polynucleotide in the manufacture of a medicament for the prevention or limitation of myocardial damage in response to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nerve damage may include severing of a nerve. The treatment may be combined with another treatment (such as a polypeptide growth factor other than MGF) that prevents or diminishes degeneration of the target organ (for example, muscle) which the damaged nerve innervates, whereby the treatment of the muscle with MGF or a polynucleotide encoding MGF prevents or diminishes degeneration. The method is useful for treating neurological disorders, preferably motorneuron disorders. These methods can reduce motoneuron loss by 20% or greater in response to nerve avulsion. This sequence represents the rabbit MGF polypeptide
                                                                                                                                                                                                                           Use of Mechano Growth Factor polypeptide or polynucleotide for preventing or limiting apoptosis in the myocardium, particularly for preventing or limiting myocardial damage in response to ischemia or mechanical overload of the heart.
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                                                                                                                                                                                         Claim 5; Fig 9; 74pp; English.
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The invention discloses a composition comprising two or more isolated rat cor human polynucleotides or a polynucleotide which represents a fragment, and carried are a vector comprising the novel polynucleotide. Also claimed are a vector comprising the novel polynucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a kit to perform the method, an array, a method for identifying an agent that increases or decreases the expression of the polynucleotide sequence that is differentially expressed in neuronal tissue of a first animal cubjected to pain, a method for identifying a compound which regulates the expression of a polynucleotide sequence which is differentially expressed in neuronal tissue of a first animal compound that regulates the activity of one or more of the polynucleotides, a method for polynucleotide sequence which is differentially the expression of a polynucleotide sequence which is differentially compound that regulates the activity of one or more of the polynucleotides, a method for producing a pharmaceutical composition, a method for identifying a compound or small molecule that regulates the activity in an animal of one or more of the polynucleotides given in the specification, a method for identifying a compound useful in treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 101
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01-NCV-2001; 2001US-0346382P
26-NCV-2001; 2001US-0333347P
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(FARB
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n injury; CCI; spared nerve injury; SNI; Chung.
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91
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  two or more isolated polypeptides, useful for treating pain in an animal.
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                                                                       pain and a pharmaceutical composition comprising the one or more polypeptides or their antibodies. The polynucleotide or the compound the modulates its activity is useful for preparing a medicament for treating pain (e.g. spinal segmental nerve injury (Chung), chronic constriction injury (CCI) and spared nerve injury (SNI) in an animal (e.g. gene therapy). The sequence presented is a rat protein (shown in Table 2 of the specification) which is differentially expressed during pain. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic form directly from WIPO at
                                               [tp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                    treating
                                                                                                                                                                                                                                                                                  that
                                                                                      at
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Sequence 181 AA;

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Matches 100;
                                                                                                   Query Match
Best Local
109
                      13
                                             49
                                                                   Similarity
                                                                  GPETICGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                    CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGST
                                             GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
CAPLKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGES
                                                                                           Conservative
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Pred.
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RESULT 7 AAE02449 standard; protein; 111 8

10-AUG-2001 (first entry)

AAE02449;

Rabbit IGF-I isoform mechano-growth factor (MGF)

amyotrophic lateral sclerosis; spinal muscular atrophy; muscular poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease. Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegene disorder; neurodegenerative disorder; atrophy;

Oryctolagus cuniculus.

WO200136483-A1

25-MAY-2001.

15-NOV-2000; 2000WO-GB004354.

15-NOV-1999; 99GB-00026968

(UNIO ) UNIV COLLEGE LONDON

Goldspink G, Johnson

N-PSDB; AAD06400. 2001-355620/37

Use of mechano-growth factor, an isoform of Insulin-like capable of reducing motoneurone loss, in the manufacture for the treatment of neurological disorder. Growth Factor-I, of a medicament

Claim 4; Page 54; 66pp; English.

The present invention relates to use of mechano-growth factor (MGF), insulin-like Growth Factor-[(IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is call of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneuron rescue. The MGF polynucleotide and polypeptide sponse to nerve adult motoneurone unfacture of a an

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                      The present sequence is the protein sequence of murine insulin-like growth factor 1B (IGF-IB). IGF-IB cDNA was used in an example of the method of the invention to generate probes for determination of IGF-IB cRNA. The method comprises a quantitative hybridisation assay for analysis of mRNA in a target nucleic acid (TNA) sample. It involves: (i) contacting a cid momobilising the TNA sample to a solid support; (ii) contacting a clabelled antisense probe to a first portion of the TNA, and a labelled sense probe to a second portion of the TNA; (iii) detecting and (iv) cquantitating the signals generated from the hybridised probes; and (iv) cdetermining the value represented by the antisense probe signal minus the sense probe signal, the value being proportional to the amount of mRNA in the TNA sample. In an example of the method, a cDNA clone containing 60 nucleotides from exon 2 and 179 nucleotides from exon 3 of the mouse IGF-IB gene was cloned into pGEN-4Z vector. Linearisation of the plasmid with EcoRI allowed transcription of a 250-nucleotide antisense probe using To polymerase. Linearisation with Hindil allowed transcription of a sense probes probe of similar length using SP6 polymerase (see ABV76186). The probes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 111; Conservative
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were purified and used to determine also in rat hepatocytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Quantitating a target nucleic acid in a sample comprises immobilizing, on a solid support, a sample comprising a target nucleic acid, and detecting and quantitating signals generated from the antisense and sense probes.
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DB; ABV76185.
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detection.
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Pred. No. 1.1e-51;
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RESULT 5
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The present invention describes an isolated peptide capable of acting as a ligand for an antibody with affinity for the C-terminus of mechanocky growth factor (MGF), for use in therapy, where the peptide is not MGF. CC Also described is an isolated peptide for use in therapy comprising the sequence (I) (X1)m(X2)n(X3)G(X4)(X5)(X6)(X7)(208)p, where X1 = a basic CC residue, X2 and X8 = any amino acid, X3 and X4 = Lys or Gln, X5 = Ser, CC Thr, Ala or Pro, X6 = Ile, phe or Leu, X7 = Asp or Glu, m = 2 or 3, n = .0 cc used in cell signaling (I) can be used for the manufacture of a cc used in cell signaling (I) can be used for the manufacture of a composition for the treatment of muscle damage, deterioration or injury, CC damage to cardiac muscle, and to manufacture a composition for the repair of damage or loss of nerve cells. The peptide can be used in cell culture media to promote growth of muscle or nerve cell lines. The peptides are cused to treat conditions associated with muscle fatigue and/or injury for example during exercise, and to treat muscle deterioration or damage for example after a heart attack. They may be useful to identify agents that potentiate or inhibit muscle or nerve cell growth, as a treatment to composition of precursor cells. The present sequence represents a mouse MGF appotosis of precursor cells. The present sequence represents a mouse MGF
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Best Local Similarity
Matches 101; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 133
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Fig 1; 21pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2003-679637/64.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
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Pred. No. 1.8e-45;
2; Mismatches 8
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Matches 111;
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The invention relates to the use of an insulin-like growth factor I (IGF-I) isoform, known as mechano-growth factor (MGF), in the manufacture of a medicament for treating nerve damage in the peripheral nervous system, or for treating nerve damage by localising MGF at the site of damage. The nerve damage may include severing of a nerve. The treatment may be
                                                                                                                                                                                                                                                                                                                                                                             Use of growth
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                                                                                                                                                                                                                                Claim 11;
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oprotective; nerve damage; peripheral nervous system; nerve sever
le; neurological disorder; motoneuron loss; motorneuron disorder;
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)B; AAS16878.
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                                                                                                                                                                                                                                                                                                                                          insulin-like growth factor-I (IGF-I) isoform known as mechano factor which is encoded by IGF-I exons 4,5,6 and has ability to motoneurone loss in response to nerve avulsion, to treat nerve
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GRINSTEAD MEDICAL
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Pred. No. 1.1e-51;
; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2003-636936/60
N-PSDB; ACF79636.
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Pred. No. 1.1e-51;
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The present sequence is that of the C-terminal end of novel rat mechano growth factor (MGF), encoded by exons 3-6 of the IGF-I gene. MGF is a splice variant and non-liver type isoform of insulin-like growth factor (IGF-I) that is activated in response to cardiac tissue damage and which has a repair function in the isohaemic and/or overloaded heart. The rat MGF transcript has a 52 base insert in the E domain that alters the reading frame and hence the C-terminal end of MGF protein in comparison with other IGF-I splice variants. The invention provides use of a MGF polypeptide or polypucleotide in the manufacture of a medicament for the prevention or limitation of myocardial damage in response to ischaemia or

of the heart by preventing or limiting apoptosis

in

limiting myoc of the heart.

limiting apoptosis miting myocardial da

of Mechano Growth Factor polypeptide or polynucleotide for preventing limiting apoptosis in the myocardium, particularly for preventing or iting myocardial damage in response to ischemia or mechanical overload

Claim 5; Fig 8;

74pp;

English.

APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327

212/078

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SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-462-040-47
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US-07-953-230A-9
                                                                                                                                                              COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PAtentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/953,230A
FILING DATE: 30-SEP-1992
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CTAINE-FELLY, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE DOCKET NUMBER: 028755-010
TELLECHMUNICATION INFORMATION:
TELLECHMUNICATION 1836-6620
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Patent No. 5476779
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Best Local Similarity 87.0%;
Matches 67; Conservative 3
TELEFAX: (703) 836-2021
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LENGTH: 176 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP: 22313-1404
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: CHEN, Thomas T
APPLICANT: SHAMBLOTT, Michael J
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Burns, Doane, Swecker & Mathis STREET: George Mason Bldg., Washington & Prince Sts. CITY: Alexandria STATE: Virginia COUNTRY: United States ZIP: 22313-1404
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Search completed: March 3, 2004, 08:06:37 Job time: 14.0422 secs
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Best Local Similarity
Matches 68; Conserv
                                                                                          105 CAPVKSGKAARSVRAQRHTDMPRTPKVSTAVQSVDRGTERR 145
                                                                                                                               61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRR 101
                                                                                                                                                                              45 GPETILCGAELVDTIQFVCGERGFYFSKFTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 104
                                                                                                                                                                                                                       1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                 59.9%; Score 359; DB 1; Length 176; 67.3%; Pred. No. 1.5e-33; tive 8; Mismatches 25; Indels
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MOLECULE TYPE:
US-08-167-641C-47
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LENGTH: 78 amino Type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 47 Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 61.3%;
Best Local Similarity 87.0%;
Matches 67; Conservative
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SOFTWARE: FASCSEQ for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/167,641C
FILING DATE: December 14, 1993
CLASSIFICATION LATA:
APPLICATION NATA:
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
APPLICATION MARCH 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Warburg Bichard 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                        APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 200
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSEQ for Windows 2.0
TURRENT APPLICATION DATA:
                                                                                                                                                                                     ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
CITY: Los Angeles
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 78 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
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MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
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                                                                                                                                                    COUNTRY: U.S.A. ZIP: 90071-2066
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No.
                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (213) 955-04-
TELEX: 67-3510
INFORMATION FOR SEQ ID NO:
                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSEQ for Windows 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 217
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
TYPE: amino acid
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FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION UNBER: 08/167,641
FILING DATE: December 14, 1993
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APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02
FILING DATE: MARCH 20, 1992
APPLICATION NUMBER: PCT/US93/02
                                                                                                                                                                                                                                                                                       ADDRESSEE: Lyon Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
CITY: Los Angeles
STATE: California
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                                                                           APPLICATION NUMBER: US/08
FILING DATE: June 5, 1995
                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62 LRPARSARSVRAQRHTD
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l Similarity 87.0%;
67; Conservative :
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Pred. No. 6.9e-35;
3; Mismatches 7;
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RESULT 10
US-09-528-108-41
) Sequence 41, Application US/09528108
) Patent No. 6312923
) Patent No. 6312973
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/989,25
PILING DATE:
ATTORNEY_AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 919 881 3175
INFORMATION FOR SEQ ID NO: 41:
APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 191 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: LBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/528,108
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CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP STREET: 3605 Glenwood Ave. Suite 310
                                                                                                                                                                                                                                                                                                            146 CAPLKPAKSAKRSVRAQRHTDMPKTQK 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          146 CAPLKPAKSAKRSVRAQRHTDMPKTQK 172
                                                                                                                                                                                                                                                                                                                                                                                                                             1 GPETICGAELVDALQFVCGPRGFYFNKFTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               78; Conservative
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VENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
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89.7%;
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Pred. No. 1.2e-39;
l; Mismatches 7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 191;
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RESULT 12
US-08-167-641C-47
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Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEX: 67-3510
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/U993/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: March 19, 1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                       APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TI
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 21:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSEQ for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/460,8901
FILLING DATE: June 5, 1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 78 amino acids
TYPE: amino acid
STRANDEDNESS: single
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                                ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: U.S.A. ZIP: 90071-2066
                                                                                                                                                                                                                                                                                                                                                                                 62 LRPARSARSVRAQRHTD 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
Los Angeles
California
                                                                                                                                                                                                                                                                                                                                                                                                                     CKPTKSARSIRAQRHTD 80
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                                                                                                                                                                                                        Woo, Savio L.C.
Smith, Louis C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  633 West Fifth Street
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                                                                                                                                                      ACID TRANSPORTER SYSTEMS
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Pred. No. 6.9e-35;
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RESULT 7
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APPLICANT: BELL, GRAEME I.;RALL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO:
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Best Local (
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CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/07/65
FILING DATE: 16-JUN-1987
PRIOR APPLICATION DATA:
APPLICATION UNMBER: 630,557
FILING DATE: 19-JUL-1984
FILING DATE:
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
                                                                                                                           SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/989,25
                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: MITITLE OF INVENTION: PINUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS.
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                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                 COUNTRY: U
ZIP: 27622
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                                                                                                                                                                                                                                                                              Raleigh
: NC
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6017731
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAPLKPAKSARSVRAQRHTDMPKTQK 100
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                                                                                                                                                                                                                                                                                                             B: Bell Seltze
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                                                                                                                                                                                                                                                                                                                                                                              PROTEINS IN YEAST
                                                                                                                                                                                                                                                                                                                                                                                               METHOD
                                                                                                                                US/08/989,251
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                                                                                                                                                                                                                                                                                                                                                                                                             Patricia
                                    5784-4
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Pred. No. 2.7e-40;
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                                                                                                                                                                                                                                                                                                                                                                                               EXPRESSION
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                                                                                                    Matches
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Best Local S
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GENERAL INFORMATION:
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                                                                                                                                                                                                                                              TELEFAX: 919 881 3175
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/340,250
                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 57
TELECOMMUNICATION INFORMATION: 919 420 2202
                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,
                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP STREET: 3605 Glenwood Ave. Suite 310
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TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
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                                                        1 GPETLCGAELVDALQFVCGPRGFYENKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
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GY: linear
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amino acid
CVRCKPTKSA-RSIRAQRHTDMPKTQK 86
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                                 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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                                                                                           Score 412.5; DB 3;
Pred. No. 1.2e-39;
Mismatches 7;
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Pred. No. 1.2e-39;
                                                                                                                              Length 191;
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                                                                                              Gaps
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USA

Philadelphia PA

One Liberty Place - 46th Floor

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Query Match
Best Local Similarity
Matches 78; Conserv
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JENERAL INFORMATION:
APPLICANT: Bradford A. Jameson and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 30-MAR-CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH,
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/881,524
FILING DATE: 08-MAY-92,
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 153
                                                                         SOFTWARE: WORDPERFECT 5.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/04329
FILING DATE: 1930507
CLASSIFICATION:
                                                                                                                                                                                                         ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETT
                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: WORDPERFECT 5.1
URRENT APPLICATION DATA:
APPLICATION NUMBER: US/08
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TTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                        DRRESPONDENCE ADDRESS:
                                                                                                                                                                      COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                          STREET: One Libert CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                          PLICANT: Bradford A. Jameson and Renato Baserga
TLE OF INVENTION: IGF-1 Analogs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Mark DeLuca
REGISTRATION NUMBER: 33,229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/07/881,524
                                                                                                                                                                                                                                                                                                                               ADDRESSEE: Kurtz Mackiewicz & Norris
STREET: One Liberty Place - 46th Floor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                                                                             DISKETTE, 3.5 INCH,
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Query Match
Best Local Sim
Matches 78;
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                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO: 11:
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                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/09/142,583A
FILING DATE: 29-Oct-1998
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/GB97/00658
FILING DATE: 11-MAR-1997
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
APPLICATION NUMBER: 36663
REGISTRATION NUMBER: 36663
REGISTRATION NUMBER: 317-263
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Local Similarity 90.7%;
les 78; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 22201
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PETENTIA Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                        TOPOLOGY: linear MOLECULE TYPE: protein SEQUENCE DESCRIPTION: SEQ ID NO: 11:
                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION: TELEPHONE: 7038164000 TELEPAX: 7038164100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: NUMBER OF SEQUENCES:
                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
ADDRESSEE: NIXON &
STREET: 1100 NORTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: GOLDSPINK, GEOFFREY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 CVRCKPTKSARSIRAORHTDMPKTOK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GPETICGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AMINO ACID
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                                                                                                                                                                     LENGTH: 156 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/09142583A
  70.6%; Score 423; DB 3; 3
90.7%; Pred. No. 5.9e-41;
tive 1; Mismatches 7;
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ER: TJU-0649
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GLEBE ROAD
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Pred. No. 5.8e-41;
1; Mismatches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Version #1.25
                                        Length 156;
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US-07-953-230A-10
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                                                                                                                                     Matches
                                                                                                                                                                      Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (703) 836-2021 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 137 amino acids
TYPE: amino acid
STRANDENNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Crane-Feury, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE/DOCKET NUMBER: 020
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/0:
FILING DATE: 30-SEP-1992
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                     Local
                                                                                                                                                                                                                        LOCATION: 116
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                               LOCATION: 7
OTHER INFORMATION:
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ZIP: 22313-1404
                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                              OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                   NAME/KEY: Peptide 
LOCATION: 31
                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: Peptide 
LOCATION: 7
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                                                                                                                                                                                                                                                                                                             LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LICANT: CHEN, Thomas T
LICANT: SHAMBLOTT, Michael J
LE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
LE OF INVENTION: FROM RAINBOW TROUT
BER OF SEQUENCES: 12
93
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alexandria
                                                                                                                                                     Similarity
                                                                                          GPETICGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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                         CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                  GPETICGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 92
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CAPLKPAKSARSVRAQRHTDMPKTQK 118
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: United States
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George Mason Bldg., Washington & Prince Sts.
                                                                                                                                       Conservative
                                                                                                                                                                                                                                                           Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
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                                                                                                                                                    70.6%;
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                                                                                                                                                                                                                                                                                                                                                                 /note=
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                                                                                                                                   Score 423; DB 1;
Pred. No. 5.1e-41;
1; Mismatches 7
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                                                              Sequence 1, Application US/08219878A
Patent No. 5473054
GENERAL INFORMATION:
APPLICANT: Bradford A. Jameson and Renato Baserga
TITLE OF INVENTION: IGF-1 Analogs
              NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock Washburn
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US-08-950-720A-9
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GENERAL INFORMATION:
                                                                                                                                                   Best Local
                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 152 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Sawielak, Deborah A
REGISTRATION NUMBER: 37,438
REFERENCE/DOCKET NUMBER: 96-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-442-6672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 98102
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: FastSEQ for Windows Version CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Jaspers, Stephen R.
TITLE OF INVENTION: INSULIN HOMOLOG
NUMBER OF SEQUENCES: 17
                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                      STRANDEDNESS: Sir
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM CONTROL OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 206-442-6678
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83
                                                                23
                                                                                                                                                   Similarity
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                                CVRCKPTKSARSIRAORHTDMPKTQK 86
                                                                                                   GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
CAPLKPAKSARSVRAORHTDMPKTQK 108
                                                                GPETICGAEL VDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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                                                                                                                                     Conservative
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                                                                                                                                                                                                                      No. 6046028e
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Pred. No. 5.7e-41;
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Kurtz Mackiewicz & No. 5473054ris

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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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Perfect score:
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   22543214141110
22543216543210
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                                   Score
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seq length: 2000000000
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Match
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Gapop 10.0 ,
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1: /cgn2_6/pcodata/2/iaa/5A_COMB.pep:*

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3: /cgn2_6/ptodata/2/iaa/6A_COMB.pep:*

4: /cgn2_6/ptodata/2/iaa/6B_COMB.pep:*

5: /cgn2_6/ptodata/2/iaa/backfiles1.pep:*

6: /cgn2_6/ptodata/2/iaa/backfiles1.pep:*
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599
  GPETLCGAELVDALQFVCGP.....THKKRKLQRRRKGSTLEEHK 111
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                                                                                                                                                                                                                                                                                                                                     Length
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US-07-953-230A-0
US-08-95-720A-9
US-08-95-720A-9
US-08-919-878A-1
PCT-US93-04329-1
US-09-142-583A-11
US-08-98-251-41
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US-09-340-271-47
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US-08-482-271-1
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US-09-08-432-517-1
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US-09-08-33-29A-1
US-09-723-981-1
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                                                                                                                               Sequence 1, Ap
Sequence 11, A
Patent NO. 5405
Sequence 41, A
Sequence 47, A
Sequence 9, Ap
Sequence 14, A
                                                                                                                                                                                                                                     Sequence 4, Appli
Sequence 10, Appli
Sequence 9, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 11, Appli
Sequence 11, Appli
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0	Query Match 85.5%; Score 512; DB 3; Length 121; Best Local Similarity 86.5%; Pred. No. 2.8e-51; Matches 96; Conservative 3; Mismatches 12; Indels 0; Gaps	US-09-142-583A.4 US-09-142-583A.4 US-09-142-583A.4 Bequence 4, Application US/09142583A Patent No. 6221842  GENERAL INFORMATION: METHOD OF TREATING MUSCULAR DISORDERS INTUBER OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS INTUBER OF SOCIENCES: 110 APPLICANT: GOLDSPINK, GEOFFREY TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS INTUBER OF SOCIENCES: 1100 NORTH GLEBE ROAD COUNTRY: USA ZIP: 22201 COMPUTER READABLE FORM: COUNTRY: USA ZIP: 22201 COMPUTER READABLE FORM: COMPUTER: FRADABLE FORM: COMPUTER: FRADABLE FORM: COMPUTER: HAPICATION OF COMPATIBLE OF COMPATION OF COMPATION OF COMPATIBLE OF COMPATIBLE OF COMPATIBLE OF COMPATION OF COMPATIO	28 341 56.9 70 4 US-09-723-896-1 Sequence 1, Appli 30 341 56.9 70 5 PCT-US92-09443A-1 Sequence 1, Appli 31 341 56.9 70 5 PCT-US93-11458-1 Sequence 1, Appli 31 341 56.9 70 5 PCT-US93-11458-1 Sequence 1, Appli 32 341 56.9 94 1 US-07-989-845-28 Sequence 28, Appli 34 341 56.9 94 1 US-08-161-044-12 Sequence 12, Appli 35 341 56.9 94 1 US-08-240-121-12 Sequence 12, Appli 36 341 56.9 94 1 US-08-240-121-12 Sequence 12, Appli 37 341 56.9 94 1 US-08-451-241-12 Sequence 12, Appli 38 341 56.9 94 5 PCT-US93-11297-12 Sequence 12, Appli 39 341 56.9 94 5 PCT-US93-11297-12 Sequence 12, Appli 39 341 56.9 94 5 PCT-US93-11298-28 Sequence 14, Appli 39 341 56.9 118 3 US-09-029-67-14 Sequence 28, Appli 39 341 56.9 155 1 US-08-328-961-8 Sequence 39, Appli 39 341 56.9 155 3 US-08-328-961-8 Sequence 39, Appli 39 341 56.9 155 3 US-08-328-961-8 Sequence 39, Appli 39 341 56.9 155 3 US-09-340-250-39 Sequence 39, Appli 39 341 56.9 155 3 US-09-340-250-39 Sequence 39, Appli 39 341 56.9 155 3 US-09-340-250-39 Sequence 39, Appli 39 341 56.9 155 3 US-09-340-250-39 Sequence 39, Appli 39 341 56.9 155 3 US-09-340-250-39 Sequence 39, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 39, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 39, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 39, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 39, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 39, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 39, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 39, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 5, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 5, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 5, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 5, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 5, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 5, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 5, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 5, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 5, Appli 30 341 56.9 155 3 US-09-340-250-39 Sequence 5, Appli 30 341 56.9 155 3 US-
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1 GPETICGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60

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RESULT 15
US-09-921-398-41
US-09-921-398-41
; Sequence 41, Application US/09921398
; Patent No. US20020055169A1
; GENERAL INFORMATION: Patricia
APPLICANT: Tekamp-Olson, Patricia
APPLICANT: Tekamp-Olson, Patricia
PROTEINS IN YEAST

PROTEINS IN YEAST

FRITCH OF INVENTION: PROTEINS IN YEAST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 191 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 41:
US-09-921-398-41
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CITY: Raleigh
STATE: NC
COUNTRY: US
ZIP: 27622
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIA Release #1.0, Vers:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/921,398
FILING DATE: 02-Aug-2001
CLASSIFICATION: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: SPIUILL WINDER: 32,933
REFERENCE/DOCKET NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-4
TELEPHONE: 919 420 2202
TELEPHONE: 919 420 2202
TELEPHONE: 191 A20 2202
LENGTH: 191 amino acids
LENGTH: 191 amino acids
Search completed: March
Job time : 151.455 secs
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Best Local Similarity
Matches 78; Conserv
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CORRESONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             68.9%; Score 412.5; DB 9; Length 191; ilarity 89.7%; Pred. No. 1.2e-38; Conservative 1; Mismatches 7; Indels 1.
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RESULT 11
US-10-207-655-55
; Sequence 55, Application US/10207655
; Publication No. US20030118592A1
; GENERAL INFORMATION:
APPLICANT: Ledbetter, Jeffrey A.
; APPLICANT: Hayden-Ledbetter, Martha S.
; TITLE OF INVENTION: BINDING DOMAIN-IMMUNOGLOBULIN FUSION PROTEINS
; FILE REFERENCE: 390069.401C1
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US-09-852-261-14
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SOFTWARE: PatentIn Ver. 2.1
                                               APPLICANT: GOLDSPINK, GEOFFREY
APPLICANT: TERENGHI, GIORGIO
TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
FILE REFERENCE: 117-351
CURRENT APPLICATION NUMBER: US/09/852,261
CURRENT FILING DATE: 2001-05-10
PRIOR APPLICATION NUMBER: GB 0011278.9
PRIOR FILING DATE: 2000-05-10
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NUMBER OF SEQ ID NOS: 4
SOFTWARE: PatentIn version 3.0
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CURRENT FILING DATE: 2002-07-25
NUMBER OF SEQ ID NOS: 426
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                                       NUMBER OF SEQ ID NOS: 14
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TYPE: PRT
ORGANISM: Homo sapiens
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l Similarity 90.7%;
78; Conservative
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Similarity 90.7%;
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Pred. No. 6.1e-40;
1; Mismatches 7,
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Pred. No. 6.1e-40;
1; Mismatches 7
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US-10-238-114-2
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                                                                                                                                                                                                                                                                                                         Sequence 2, Application US/10238114
Publication No. US20030100073A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 3, Application US/10238114
Publication No. US20030100073A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn version 3.1
SEQ ID NO 3
LENGTH: 105
                                     NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.1
SEQ ID NO 2
LENGTH: 153
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CURRENT APPLICATION NUMBER: US/10/238,114
CURRENT FILING DATE: 2002-09-10
PRIOR APPLICATION NUMBER: US/10/238,114
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Best Local (
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Best Local Similarity
                                                                                                   APPLICANT: Merial
APPLICANT: MADREONI, Christine Michele
TITLE OF INVENTION: IGF-1 AS FELINE VACCINE ADJUVANT,
FILE REFERENCE: 454313-3165.1
CURRENT APPLICATION NUMBER: US/10/238,114
CURRENT FILING DATE: 2002-09-10
PRIOR APPLICATION NUMBER: FR 01 11736
PRIOR FILING DATE: 2001-09-11
PRIOR APPLICATION NUMBER: US 60/318,666
PRIOR PILING DATE: 2001-09-12
PRIOR PILING DATE: 2001-09-12
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PRIOR FILING DATE: 2001-09-11
PRIOR APPLICATION NUMBER: US 60/318,666
PRIOR FILING DATE: 2001-09-12
NUMBER OF SEQ ID NOS: 20
ORGANISM: Felis catus
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77; Conservative
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89.5%; Pred. No. 8.7e-40;
ative 2; Mismatches 7;
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Pred. No. 1.5e-39;
1; Mismatches 8;
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US-10-251-661-8

Sequence 8, Application US/10251661

Publication No. US20030166555A1

GENERAL INFORMATION:

APPLICANT: Alberini, Cristina M.

APPLICANT: Bear, Mark F.

APPLICANT: Bear, Mark F.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Homo sapiens US-09-852-261-10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No. US20020083477A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                          Matches
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Best Local
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NUMBER OF SEQ ID NOS: 14
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 10
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PRIOR FILING DATE: 2002-05-24
PRIOR APPLICATION NUMBER: 60/393,214
PRIOR FILING DATE: 2002-07-02
PRIOR APPLICATION NUMBER: 60/436,254
PRIOR FILING DATE: 2002-12-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT FILING DATE: 2001-05-10
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TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
FILE REFERENCE: 117-351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: GB 0011278.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: GOLDSPINK, GEOFFREY APPLICANT: TERENGHI, GIORGIO
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TITLE OF INVENTION: Methods and Compositions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 195
TYPE: PRT
ORGANISM: Homo sapiens
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TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                      1 Similarity 90.7 78; Conservative
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Pred. No. 1.9e-44;
3; Mismatches 12;
  for Regulating
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US-10-136-639-3
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US-09-919-497-74
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LENGTH: 153
TYPE: PRT
                                                                                        Sequence 3, Application US/10136639
publication No. US20030072761A1
GENERAL INFORMATION:
APPLICANT: LeBowitz, Jonathan
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Best Local (
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TITLE OF INVENTION: PROGNOSTIC CLASSIFICATION OF ENDOMETRIAL CANCER
FILE REFERENCE: B0801/7225
CURRENT APPLICATION NUMBER: US/09/919,497
CURRENT FILING DATE: 2001-07-31
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CURRENT APPLICATION NUMBER: US/10/251,661
CURRENT FILING DATE: 2002-09-20
PRIOR APPLICATION NUMBER: 60/193,614
PRIOR FILING DATE: 2000-03-31
PRIOR APPLICATION NUMBER: PCT/US01/10661
PRIOR APPLICATION NUMBER: PCT/US01/10661
PRIOR FILING DATE: 2001-04-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT FILING DATE: 2001-07-31
PRIOR APPLICATION NUMBER: US 60/221,735
PRIOR FILING DATE: 2000-07-31
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SOFTWARE: FastSEQ for Windows Version 4.0
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FILE REFERENCE: SYM-008
CURRENT APPLICATION NUMBER: US/10/136,639
CURRENT FILING DATE: 2002-09-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn version 3.0
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ORGANISM: Homo
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                                                     PPLICANT: LeBowitz, Jonathan
ITLE OF INVENTION: METHODS AND COMPOSITIONS
ITLE OF INVENTION: BARRIER
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ilarity 90.7%;
Conservative
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Pred. No. 5.4e-40;
1; Mismatches 7
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                                                                         FOR TARGETING PROTEINS ACROSS THE BLOOD
                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 153;
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RESULT 4
US-09-852-261-2
JS-09-852-261-2
Sequence 2, Application US/09852261
Patent No. US20020083477A1
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TYPE: PRT
; ORGANISM: Ozyctolagus cuniculus
US-09-852-261-6
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US-09-852-261-6
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                                                                  GENERAL INFORMATION:
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SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 6
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Best Local
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CURRENT APPLICATION NUMBER: US/10/161,088
CURRENT FILING DATE: 2002-05-31
PRIOR APPLICATION NUMBER: SE 0101934-8
PRIOR FILING DATE: 2001-06-01
NUMBER OF SEQ ID NOS: 3
APPLICANT: GOLDSPINK, GEOFFREY
APPLICANT: TERENGHI, GIORGIO
TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
FILE REFERENCE: 117-351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: GOLDSPINK, GEOFFREY
APPLICANT: TERENGHI, GIORGIO
TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
FILE REFERENCE: 117-351
CURRENT APPLICATION NUMBER: US/09/852,261
CURRENT FILING DATE: 2001-05-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT FILING DATE: 2001-05-10
PRIOR APPLICATION NUMBER: GB 0011278.9
PRIOR FILING DATE: 2000-05-10
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                                                                                                                                                                                                                                                                                                                                        96;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 82
                                                                                                                                                                                               CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTFEEHK 111
                                                                                                                                                                                                                                                                                                      GPETICGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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Pred. No. 3.7e-50;
3; Mismatches 12
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Pred. No. 6.8e-53;
2; Mismatches 8
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Sequence 20, Applica Publication No. US20 GENERAL INFORMATION

Application US/10443466A No. US20040018191A1

APPLICANT: Wang, APPLICANT: Pach

APPLICANT:

APPLICANT:

Leonard, Presta Brams, Peter Feingersh, Diane Williams, Denise

Greenberg, ku-Greenberg, ku-

Pachter, Hailey,

Jonathan A

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US-10-443-466A-20
                                                                                                                                                                                                                                                              ; ORGANISM: Rattus sp. US-09-852-261-12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 5
                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 12
LENGTH: 105
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No. US20020083477A1
GENERAL INFORMATION:
APPLICANT: GOLDSPINK, GEOFFREY
APPLICANT: TERENGHI, GIORGIO
TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
FILE REFERENCE: 117-351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
LENGTH: 110
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Best Local Similarity
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Best Local S
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CURRENT FILING DATE: 2001-05-10
PRIOR APPLICATION NUMBER: GB 0011278.9
PRIOR FILING DATE: 2000-05-10
NUMBER OF SEQ ID NOS: 14
                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: GB 0011278.9 PRIOR FILING DATE: 2000-05-10 NUMBER OF SEQ ID NOS: 14
                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/852,261
CURRENT FILING DATE: 2001-05-10
                                                                                     61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
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                                                                                                                               1 GPETICGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
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                                                              CVRCKPTKSARSIRAQRHTDMPKTQK
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100.0%; Fr
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100.0%; Pred. No. 1.5e-45;
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Pred. No. 3.5e-48;
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                                                                                                                                                                                                                                                                                                                                                                                          Published Applications AA:*

1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*

2: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*

3: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*

4: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*

6: /cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*

6: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*

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9: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*

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Match
               is the number of results predicted by chance to have a ater than or equal to the score of the result being printed, rived by analysis of the total score distribution.
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154.752 Million cell updates/sec
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   GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
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US-09-852-261-10
US-09-852-261-10
US-09-852-261-10
US-10-251-661-8
US-10-251-661-8
US-10-251-661-8
US-10-251-661-8
US-10-238-114-3
US-10-238-114-3
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Sequence 4, Appli
Sequence 6, Appli
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Sequence 12, Appli
Sequence 10, Appl
Sequence 10, Appl
Sequence 10, Appl
Sequence 10, Appl
Sequence 3, Appli
Sequence 74, Appl
Sequence 3, Appli
Sequence 55, Appl
Sequence 14, Appl
Sequence 14, Appl
Sequence 2, Appli
Sequence 2, Appli
Sequence 14, Appl
Sequence 14, Appl
Sequence 14, Appl
Sequence 2, Appli
Sequence 14, Appl
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16 412.5 68.9 191 14 US-10-280-826-41 Sequence 41, Appl 18 341 56.9 70 9 US-09-848-664-29 Sequence 29, Appl 20 341 56.9 70 9 US-09-88-664-30 Sequence 30, Appl 21 341 56.9 70 9 US-09-88-664-30 Sequence 30, Appl 22 341 56.9 70 10 US-09-839-327A-8 Sequence 3, Appl 22 341 56.9 70 11 US-10-66-009A-1 Sequence 1, Appl 22 341 56.9 70 12 US-10-66-009A-1 Sequence 1, Appl 22 341 56.9 70 14 US-10-136-639-1 Sequence 1, Appl 22 341 56.9 70 14 US-10-136-639-1 Sequence 1, Appl 22 341 56.9 70 14 US-10-136-639-1 Sequence 7, Appl 34 56.9 70 15 US-10-272-43A-7 Sequence 7, Appl 34 56.9 70 15 US-10-272-43A-7 Sequence 7, Appl 34 56.9 70 16 US-10-272-43A-7 Sequence 14, Appl 34 56.9 70 16 US-10-272-43A-7 Sequence 14, Appl 34 56.9 118 14 US-10-272-483A-7 Sequence 14, Appl 34 56.9 155 US-10-272-483A-7 Sequence 39, Appl 34 56.9 155 US-10-280-826-39 Sequence 39, Appl 34 56.9 155 US-10-280-826-39 Sequence 39, Appl 34 56.9 155 US-10-280-826-39 Sequence 29, Appl 34 56.9 150 US-10-32-046-42 Sequence 39, Appl 34 56.9 150 US-10-32-046-42 Sequence 39, Appl 34 56.9 150 US-10-280-826-39 Sequence 27, Appl 34 56.9 150 US-10-280-826-39 Sequence 27, Appl 35 US-10-280-826-39 Sequence 27, Appl 36 US-10-280-826-39 Sequence 27, Appl 36 US-10-280-826-39 Sequence 27, Appl 36 US-10-280-826-39 Sequence 27, Appl 37 US-10-280-826-39 Sequence 27, Appl 38 221 36.9 180 14 US-10-280-826-39 Sequence 27, Appl 38 221 36.9 180 14 US-10-280-826-39 Sequence 28, Appl 38 221 36.9 180 14 US-10-280-826-39 Sequence 29, Appl 42 221 36.9 180 15 US-10-272-531A-2 Sequence 29, Appl 42 221 36.9 180 15 US-10-272-531A-2 Sequence 29, Appl 42 221 36.9 180 15 US-10-272-531A-2 Sequence 29, Appl 42 221 36.9 180 15 US-10-272-531A-2 Sequence 29, Appl 42 221 36.9 180 15 US-10-272-483A-2 Sequence 29, Appl 42 221 36.9 180 15 US-10-272-531A-2 Sequence 29, Appl 42 221 36.9 180 15 US-10-272-531A-2 Sequence 29, Appl 42 221 36.9 180 15 US-10-272-531A-2 Sequence 29, Appl 42 221 36.9 180 15 US-10-272-531A-2 Sequence 29, Appl 42 221 36.9 180 15 US-10-272-531A-2 Sequence 29, Appl 42 221 36.9 180 15 US-1
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## ALIGNMENTS

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RESULT 2
US-10-161-088-2
; Sequence 2, App.
; Publication No
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US-09-852-261-4
Sequence 4, Application US/09852261
Patent No. US20020083477A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: GOLDSPINK, GEOFFREY
APPLICANT: TERRINGHI, GIORGIO
TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
FILE REFERENCE: 117-351
CURRENT APPLICATION NUMBER: US/09/852,261
CURRENT FILING DATE: 2001-05-10
PRIOR APPLICATION NUMBER: GB 0011278.9
PRIOR FILING DATE: 2000-05-10
NUMBER OF SEQ ID NOS: 14
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SEQ ID NO 4
LENGTH: 111
TYPE: PRT
ORGANISM: Rattus sp.
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Best Local
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Application US/10161088
No. US20030077761A1
                                                                                                                                   CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
                                                                                                                                                                       GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                       CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                            100.0%; Score 599; DB 9;
100.0%; Pred. No. 5.4e-60;
tive 0; Mismatches 0;
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A;Reference number: A34938; MUID:89096956; PMID:3211153
A;Accession: A34938
A;Molecule type: mRNA
A;Residues: 'Y',21-153 <TAV>
A;Cross-references: GB:M31175
R;Francis, G.L.; Owens, P.C.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.
T. Endocrinol. 122, 681-687, 1989
A;Title: Purification, amino acid sequences and assay cross-reactivities of porcine insula, Feference number: A60738; MUID:90039035; PMID:2809477
A;Accession: A60738
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F;22-48/Domain: propeptide #status predicted <PRO>
F;49-118/Product: insulin-like growth factor IA (active) #status experimental <DOB>
F;49-77/Domain: insulin B chain-like #status experimental <DOB>
F;9-89/Domain: insulin connecting C peptide-like #status experimental <CHC>
F;00-110/Domain: insulin A chain-like #status experimental <DOA>
F;111-118/Domain: D peptide #status experimental <CHD>
F;111-13/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CPR>
F;54-96,66-109,95-100/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: EMBL:X17638; NID:g1995; PIDN:CAA35632.1; PID:g1996
R;Tavakkol, A.; Simmen, F.A.; Simmen, R.C.M.
Mol. Endoorinol. 2, 674-681, 1988
A;Title: Porcine insulin-like growth factor-I (pIGF-I): complementary deoxyribonucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Dickson, M.C.; Huskisson, N.S.; Gilmour, R.S. submitted to the EMBL Data Library, November 1989
A;Description: Porcipe Insulin-like growth factor gene: sequence of exon and 5' non-codi A;Reference number: S21488
A;Accession: S21488
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Nucleic Acids Res. 18, 364, 1990
Nucleic Acids Res. 18, 364, 1990
A;Title: Nucleotide sequence of porcine insulin-like growth factor I: 5' untranslated re A;Reference number: S12825; MUID:90221822; PMID:2326169
A;Accession: S12825
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N;Alternate names: somatomedin C
C;Species: Sus scrota domestica (domestic pig)
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 16-Jul-1999
C;Accession: S12825; S21488; A34938; A60738
R;Mueller, M., Brem, G.
Nucleic Acids Res. 18, 364, 1990
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A; Molecule type: protein A; Residues: 49-117, 'X' <
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A; Residues: 1-21 < DIC>
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A; Residues: 1-153 < MUE>
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A;Note: a form of IGF: lacking the first three residues and possessing C;Superfamily: insulin C;Keywords: alternative splicing; colostrum; growth factor; plasma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Biochem. J. 251, 95-103, 1988
A;Title: Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences and biologic A;Reference number: S00465; MUID:88268820; PMID:3390164
A;Accession: S00465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Status: preliminary
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A; Residues: 49-118 < FRA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Cross-references: EMBL: X52388
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49
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   <FRA>
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Pred. No. 3.5e-35;
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C;Keywords: alternative splicing; growth factor; plasma F;7-3J/Domain: propagide #status predicted ePRO> F;34-103/Product: insulin-like growth factor I (active) #status experimental F;34-62/Domain: insulin chain B-like #status predicted <DOB> F;63-74/Domain: insulin connecting peptide-like #status predicted <CHC> F;75-95/Domain: insulin chain A-like #status predicted <DOA> F;95-103/Domain: poptide D #status predicted <CHD> F;104-138/Domain: carboxyl-terminal propeptide (E peptide) #status predicted F;39-81,51-94,80-85/Disulfide bonds: #status predicted
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C;Superfamily: insulin
C;Keywords: growth factor
C;Keywords: growth factor
F;1-22/Domain: signal sequence #status predicted <SIG>
F;23-48/Domain: propeptide #status predicted <PRO>
F;49-183/Product: insulin-like growth factor IA #status experimental
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A;Residues: 1-138 <DIC>
A;Residues: G.L; MSL:X51358
A;Francis, G.L.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.; Owe
Endocrinology 124, 1173-1183, 1989
A;Title: Sheep insulin-like growth factors I and II: sequences,
A;Reference number: 807198; MUID:89136887; PMID:2537174
A;Accession: S07198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
J. Wol. Endocrinol. 6, 17-31, 1991
A;Title: The ovine insulin-like growth factor-I gene: clareterence number: S22877; MUID:91197361; PMID:2015053
A;Accession: S22878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  insulin-like growth factor I precursor, splice form 2 - sheep C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep) C;Dste: 23-Apr-199 #sequence revision 23-Apr-1999 #text_change 23-Jul-1999 C;Accession: S22878; S07198
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A; Residues: 34-103 < FRA>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Status: preliminary
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94
                                                                                                           34
                                                  61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
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CAPIKAAKSARSVRAQRHTDMPKAQK 119
                                                                                                        GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 93
                                                                                                                                                       GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                                                                                      Conservative
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89.5%;
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    Mismatches

                                                                                                                                                                                                                                           Score 410; DB 2; Length 138. Pred. No. 2.1e-34;
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Pred. No. 3.5e-35;
                                                                                                                                                                                                                      Mismatches
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Search completed: March Job time : 11.7018 secs

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A;Reference number: JC2483; MUID:95201385; PMID:7765981
A;Acession: JC2483
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Cancer Res. 53, 2475-2478, 1993
A;Title: Characterization of in
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                                                                                                                                                                A;Molecule type: mRNA
A;Residues: 1-154 <MIK>
A;Cross-references: GB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  insulin-like growth factor-I precursor - goat
C;Species: Capra aegagrus hircus (domestic goat)
C;Date: 16-Mar-1995 #sequence_revision 26-May-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;111-118/Domain: D peptide #status experimental <CHD>
;119-153/Domain: carboxyl-terminal propeptide (E peptide) #status predicted
;54-96,66-109,95-100/Disulfide bonds: #status predicted
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;Introns: 21/3; 74/1; 134/3
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;Residues: 24-153 <RAL>
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                                                                                Introns: 21/3; 75/1; 135/3
                                                                                                                             Genetics:
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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                                                                                                                                                                     GB:S11378;
sequence
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Pred. No. 1.1e-35;
1; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                      H.; Yamano, Y.; Sakai, H.; Komano, 7-92, 1995
                                                                                                                                                                     :D26116;
predicted <SIG>
                                                                                                                                                                     DDBJ:D26117; DDBJ:D26118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #text_change 17-Mar-1999
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A;Residues: 1-153 < FOT>
A;Cross-references: EMBL;X15726; NID:g454;
A;Experimental source: liver
R;Honegger, A.; Humbel, R.E.
J. Biol. Chem. 261, 569-575, 1986
A;Title: Insulin-like growth factors I and A;Reference number: A92585; MUID:86085881;
A;Accession: A25623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A/Gene: IGFIa
C/Superfamily: insulin
C/Keywords: growth factor
F/20-89/Product: insulin-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gene 130, 305-306, 1993
A;Title: Sequence of a cDNA encoding dog insulin-like growth A;Reference number: PN0622; MUID:93366192; PMID:8359700
 A; Residues: 49-1
R; Francis, G.L.;
                                                                                                                                                                                                                                                                           C;Accession: S12672; A25623; S00465
R;Fotsis, T.; Murphy, C.; Gannon, F.
Nucleic Acids Res. 18, 676, 1990
                                                                                                                                                                                                                                                                                                                                                        N; Alternate names:
C; Species: Bos prim
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            insulin-like growth factor Ia precursor - dog (fragment)
C;Species: Canis lupus familiaris (dog)
C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change
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                   A; Molecule type: protein A; Residues: 49-118 < HON>
                                                                                                                                                                                      A; Molecule type: mRNA
A; Residues: 1-153 < FO
                                                                                                                                                                                                                                           A; Title: Nucleotide sequence of the bovine A; Reference number: S12672; MUID: 90175014;
                                                                                                                                                                                                                                                                                                                                    C;Species: Bos primigenius taurus (cattle)
C;Date: 31-Mar-1988 #sequence_revision 28-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          片
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C; Comment: This protein
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                                                                                                                                                                                                                             A; Accession: S12672
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Best Local
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89.58;
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90.7%;
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                                                                                                                                                                                                                                                                                                                                    revision 28-Apr-1995 #text_change
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F.J.;
                                                                                                                                                                                                                                                                                                                                                                                           bovine (fragment)
                                                                           II in fetal PMID:3941093
                                                                                                                                                                    PIDN: CAA33746.1;
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PMID:2308858
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                                                                                             adult bovine serum.
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A;Cross-references: EMBL:X52951
C;Superfamily: insulin
C;Superfamily: ins
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Mol. Endocrinol. 4, 1914-1920, 1990
A;Title: A novel human insulin-like growth factor I messenger RNA
A;Reference number: A36552; MUID:91187000; PMID:2082190
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A;Title: Sequence of a cDNA encoding guinea pig IGF-I. A;Reference number: S12719; MUID:90332447; PMID:2377480
A;Accession: S12719
                                                                                                                                                                                                                                                                                                                                                                            A;Molecule type: mRNA
A;Residues: 1-137 <TOB>
A;Cross-references: GB:M37484; NID:g184833; PIDN:AAA52789.1; PID:g184834
C;Superfamily: insulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: Homo sapiens (man)
C;Date: 12-Apr-1991 #sequence_revision 12-Apr-1991
C;Accession: A36552
R;Tobin, G.; Yee, D.; Bruenner, N.; Rotwein, P.
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C;Species: Cavia porcellus (guinea pig)
C;Date: 30-Sep_1991 #sequence_revision 30-Sep-1991 #text_change 07-Nov-1997
C;Accession: S12719
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61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
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                                                                                                                                                GPETICGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRIEMY 60
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                                                                            GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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                                                                                                                                                                                                                            Score 423; DB 2;
Pred. No. 9.9e-36;
1; Mismatches 7
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Pred. No. 9.9e-36;
1; Mismatches 7;
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A;Residues: 49-118 <RIN>
A;Residues: 49-118 <RIN>
R;Karey, K.P.; Marquardt, H.; Sirbasku, D.A.
Blood 74, 1084-1092, 1989
A;Title: Human platelet-derived mitogens. Identification
A;Title: Human platelet derived mitogens. Identification
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C;Date: 24-Apr-1984 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000 C;Accession: A92581; A23614; A93321; JT0571; A23622; A92726; A60483; S30519; R;Rotwein, P.; Pollock, K.M.; Didier, D.K.; Krivi, G.G.
J. Biol. Chem. 261, 4828-4832, 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GB:M27544; NID:g184829; PIDN:AAA52787.1; PID:g306927 R;Rinderknecht, E.; Humbel, R.E.
J. Biol. Chem. 253, 2769-2776, 1978
A;Title: The amino acid sequence of human insulin-like growth factor I and its structu A;Reference number: A92226; MUID:78130171; PMID:632300
A;Accession: A92226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: EMBL:X57025; NID:g33007; PIDN:CAA40342.1; PID:g33008 R;Le Bouc, Y.; Dreyer, D.; Jaeger, F.; Binoux, M.; Sondermeyer, P. FEBS Lett. 196, 108-112, 1986 A;Title: Complete characterization of the human IGF-I nucleotide sequence A;Reference number: A23622; MUID:86108910; PMID:2935423 A;Accession: A23622
                                                                                                A;Experimental source: platelet lysate
R;Nordqvist Sandberg, A.C.; Stahlbom, P.A.; Lake, M.; Sara,
submitted to the EMBL Data Library, November 1990
A;Description: Nucleotide sequence of the human fetal brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: GB:X00173; NID:g33015; PIDN:CAA24998.1; PID:g33016
A;Note: Met-24 is proposed as a likely initiator
R;Steenbergh, P.H.; Koonen-Reemst, A.M.C.B.; Cleutjens, C.B.J.M.; Sussibiochem. Biophys. Res. Commun. 175, 507-514, 1991
A;Title: Complete nucleotide sequence of the high molecular weight hum.
                                        A;Reference number: S30519
A;Accession: S30519
                                                                                                                                                                                                                                                        A; Molecule type: protein
A; Residues: 49-53,'X',55-65,'X',67-75 <KAR>
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A;Residues: 1-153 <LEB>
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A; Residues: 1-153 < JAN>
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A;Title: Sequence of cDNA encoding human insulin-like growth factor I precursor.
A;Reference number: A93321; MUID:84068210; PMID:6358902
A;Accession: A93321
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A;Residues: 24-153 <DEP>
A;Cross-references: GB:X03420; GB:X00362;
R;Jansen, M.; yan Schaik, F.M.A.; Ricker,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEBS Lett. 195, 179-184, 1986
A; Title: Organization of the human genes for insulin-like A; Reference number: A91356; MUID:86108862; PMID:3002851
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A;Residues: 1-153 <ROT>
A;Cross-references: GB:M14156; NID:g183107; PIDN:AAA52538.1; PID:g183110
R;de Pagter-Hölthmizen, P.; yan Schaik, F.M.A.; Verduijn, G.M.; van Ommer
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A; Residues: 1-153 <STE>
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A;Accession: JT0571
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insulin-like growth factor I precursor, splice form A [validated] N;Alternate names: IGF-I long splice form precursor; IGF-IA; somaton A48960; 1

gene.

growth factors I Ommen, and G.J.B.;

Вос

NID:g33020; PIDN:CAA27152.1; PID:g33021; A.T.; Bullock, B.; Woods, D.E.; Gabbay, J

ж.н. СВ:

C.B.J.M.; Sussenbach, J.S.

weight human IGF-I mRNA

sequence isolated

0f insulinlike growth factors

fetal brain IGF-la.

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A;Molecule type: mRNA
A;Residues: 46-153 <MUR>
A;Residues: 46-153 <MUR>
A;Cross-references: GB:M17714; NID:g204324; PIDN:AAA41227.1; PID:g204325
A;Cross-references: GB:M17714; NID:g204324; PIDN:AAA41227.1; PID:g204325
A;Ratao, H.; Takenaka, A.; Miura, Y.; Nishiyama, M.; Noguchi, T.
A;Ratao, H.; Takenaka, A.; Miura, Y.; Nishiyama, M.; Noguchi, T.
A;Title: Evidence of introduction by molecular cloning of artificial inverted sequence
A;Reference number: JN0088; MUID:91136779; PMID:1368576
A;Accession: JN0088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: mRNA
A;Residues: 27-153 <CAS>
A;Residues: 27-153 <CAS>
A;Cross-references: GB:M17335; NID:g204751; PIDN:AAA41386.1; PI
R;Kato, H.; Okoshi, A.; Miura, Y.; Noguchi, T.
R;Kato, Elol. Chem. 54, 1599-1601, 1990
A;Title: A new cDNA clone relating to larger molecular species A;Reference number: JH0133; MUID:91103966; PMID:1368571
A;Accession: JH0133
                                                                        A;Note: the authors present evidence that this mRNA may contain R;Tamura, K.; Kobayashi, M.; Ishii, Y.; Tamura, T.; Hashimoto, K J. Biol. Chem. 264, 5616-5621, 1989
A;Title: Primary structure of rat insulin-like growth factor-I a A;Reference number: A32857; MUID:89174609; PMID:2538424
A;Accession: A32857
                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 'MSAPP', 22-153 <KA2>
A; Experimental source: liver
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A;Title: Identification, characterization, and regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Title: Isolation of rat testis cDNAs encoding an insulin-like growth factor I A;Reference number: A27849; MUID:88003970; PMID:3652906 A;Accession: A27849
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A;Title: Mosaic evolution of the insulin-like growth factors. Organization, A;Reference number: A27804; MUID:87222423; PMID:3034909
A;Accession: B27804
                       A; Molecule type: protein A; Residues: 49-118 < TAM>
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A; Residues: 27-153 < KAT>
A; Cross-references: GB:D00698; NID:g220780; PIDN:BAA00604.1;
A; Experimental source: liver
A; Experimental source: liver
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C;Date: 16-Mar-1989 #sequence_revision 16-Mar-1989 #text_change 21-Jul-2000
C;Accession: B27804; A27849; JH0133; A28504; JN0088; A32857; A61096
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87; Conserv
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262, 7894-7900, 1987
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Pred. No. 9.5e-40;
3; Mismatches 12
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Hoyt, E.C.;
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GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY

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A;Gene: igf1
C;Superfamily: insulin
C;Superfamily: insulin
C;Seywords: alternative splicing; growth factor
C;Keywords: alternative splicing; growth factor
F;1-22/Domain: signal sequence #status predicted <SIG>
F;23-127/Product: insulin-like growth factor IA (active) #sta
F;23-51/Domain: insulin chain B-like #status predicted <DOB>
F;25-63/Domain: insulin connecting C peptide-like #status pre
F;64-84/Domain: insulin chain A-like #status predicted <DOA>
F;85-92/Domain: D peptide #status predicted <DOD>
F;85-92/Domain: carboxyl-terminal propeptide (E peptide) #st
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Species: Mus musculus (house mouse)
(;Date: 30-Jun-1988 #sequence revision 30-Jun-1988 #text_change 16-Jul-1999
C;Accession: A25440; I55295, I59090; B25540
R;Bell, G.I.; Stempien, M.M.; Fong, N.M.; Rall, L.B.
Nucleic Acids Res. 14, 7873-7882, 1986
A;Title: Sequences of liver cDNAs encoding two different mouse insulin-like A;Reference number: A93643; MUID:87040760; PMID:3774549
A;Accession: A25540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J. Biol. Chem. 264, 13810-13817, 1989
A;Title: Insulin-like growth factors (IGP)
A;Reference number: I55295; MUID:89340472;
A;Accession: I55295
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A;Residues: 1-127 <BELD
A;Residues: 1-127 <BELD
A;Cross-references: GB:X04480; NID:g51801; PIDN:CAA28168.1; PID:g51802
A;Cross-references: GB:X04480; NGCusker, R.H.; Clemmons, D.R.; Rotwein, R;Tollefsen, S.E.; Lajara, R.; McCusker, R.H.; Clemmons, D.R.; Rotwein, J. Biol. Chem. 264, 13810-13817, 1989
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C;Keywords: alternative splicing; growth factor
F;49-118/Product: insulin-like growth factor I:
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                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: GB:M14983; NID:g194495; PIDN:AAA37925.1; PID:g194496
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A;Residues: 49-108 <RE2>
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A; Residues: 49-53, 'X', 55-65 < CAN>
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                        73.5%;
94.2%;
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95.3%;
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Score 440; DB 2;
Pred. No. 1.8e-37;
1; Mismatches 4
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Pred. No. 1e-37;
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PMID:3467309
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PMID:2474537
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                                                                                                 (E peptide) #status
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insulin-like growth factor I precursor - rat (;Species: Rattus norvegicus (Norway rat) c;Date: 09-Jun-1988 #sequence_revision 09-Jun-1988 #text_change 16-Jul-1999 C;Accession: A27804; 165202 R;Shimatsu, A.; Rotwein, P. J. Biol. Chem. 262, 7894-7900, 1987 J. Biol. Chem. 262, 7894-7900, 1987 A;Title: Mosaic evolution of the insulin-like growth factors. Organization, A;Reference number: A27804; MUID:87222423; PMID:3034909
                                                                                                                                                                                                                                                                                                               insulin-like growth factor I precursor form 2 - rat C;Species: Rattus norvegicus (Norway rat) C;Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999 C;Accession: B40912 R.; Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D. R;Roberts Jr., C.T.; Lasky, S.R.; Lowe Jr. W.L.; Seaman, W.T.; LeRoith, D. Mol. Endocrinol. 1, 243-248, 1987
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B40912
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A;Status: preliminary; translated from GB/EMBL/DDBJA;Molecule type: mRNA
A;Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Biochem. Biophys. Res. Commun. 146, 1154-1159, 1987
A;Title: Rat IGF-I cDNA's contain multiple 5'-untranslated
A;Reference number: 152218; MUID:87298553; PMID:3619921
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A27804
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                                                                                                                                              A;Molecule type: mRNA
A;Residues: 1-127 <ROB>
A;Cross-references: GB:M15481; NID:g204753;
C;Superfamily: insulin
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A; Residues: 1-181 <SHI>
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                    GPETICGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
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Conservative
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                                                              Score 464; DB
Pred. No. 6.5e
O; Mismatches
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Pred. No. 4.5e-47;
1; Mismatches 5
                                                                                                                                                                                                                                                                           PMID:3453891
                                                                                    6.5e-40;
                                                                                                                                                                    PIDN: AAA41387.1;
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A;Cross-references: GB:X56774; GB:S61860; NID:g32991; PIDN:CAA40093.1; PID:g32992
A;Experimental source: anaplastic oligodendrogioma
A;Note: sequence modified after extraction from NCBI backbone
A;Note: the authors translated the codon CAG for residues 124 and 133 as Glu
A;Note: sequence extracted from NCBI backbone (NCBIN:133058)
R;Siegffried, J.M.; Kasprzyk, P.G.; Treston, A.M.;
Proc. Natl. Acad. Sci. U.S.A. 89, 8107-8111, 1992
A;Title: A mitogenic peptide amide encoded within the E peptide domain of the insu
A;Reference number: A42664; MUID:92390398; PMID:1325646
A;Contents: annotation; IBE-1; amidated carboxyl end
C;Genetics:
C;Reywords: alternative splicing; amidated carboxyl end; growth factor; plasma C;Reywords: alternative splicing; amidated <SIG> F;1-21/Domain: signal sequence #status predicted <SIG> F;22-48/Domain: propeptide #status predicted <PRO> F;49-118/Product: insulin-like growth factor I #status predicted <CHB> F;49-77/Domain: insulin chain B-like #status predicted <CHB> F;78-89/Domain: insulin connecting C peptide-like #status predicted <CHA> F;90-110/Domain: insulin chain A-like #status predicted <CHA> F;111-118/Domain: D peptide #status predicted <CHD> F;111-118/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHE> F;115-172/Product: insulin-like growth factor IB-El amide #status predicted <MA2>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: EMBL:X56774; NID:
R;Sandberg-Nordqvist, A.C.; Stahlbom,
Cancer Res. 53, 2475-2478, 1993
A;Title: Characterization of insulin-
A;Reference number: A48960; MUID:93266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Molecule type: mRNA, A;Molecule type: mRNA, Residues: 1-195 (ROT2), A;Residues: 1-195 (ROT2), A;Residues: 1-195 (ROT2), A;Cross-references: GB:M11568; NID:g183111; PIDN:AAA52539.1; PID:g183112 A;Casandberg Nordqvist; A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R. submitted to the RMBL Data Library, November 1990 A;Description: Nucleotide sequence of the human fetal brain IGF-1b. A;Reference number: S30540
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A;Title: Two insulin-like growth factor I messenger RNAs
A;Reference number: A26181; MUID:86094355; PMID:3455760
A;Accession: A26181
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A;Introns: 21/3; 74/1; 134/3
C;Superfamily: insulin
C;Keywords: alternative splicing;
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A;Residues: 1-195 <ROT1>
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lbom, P.A.; Reinecke, M.; (
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# ALIGNMENTS

RESULT 2 A26859	Query Match 98.8%; Score 592; DB 2; Length 133; Best Local Similarity 99.1%; Pred. No. 7.3e-53; Matches 110; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  Qy 1 GPETLCGAELUDALOFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60	RESULT 1 A40912 A40912 insulin-like growth factor I precursor form 1 - rat C;Species: Rattus norvegicus (Norway rat) C;Dete: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999 C;Accession: A40912 R;Roberts Jr., C.T.; Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D. Mol. Endocrinol. 1, 243-248, 1987 A;Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribonuc c tissues. A;Reference number: A40912; MUID:88288198; PMID:3453891 A;Accession: A40912 A;Scatus: preliminary A;Molecule type: mRNA A;Residues: 1-133 -KONB> A;Cross-references: GB:M15480; NID:g204749; PIDN:AAA41385.1; PID:g204750 C;Superfamily: insulin
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PIR; A41399; A41399.
HSSP; P01343; 1GF1.
InterPro; IPR004825; Ins/IGF/relax.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00277; INSULINB.
SMAXT; SM00078; I1CF; 1.
PROSITE; PS00262; INSULIN; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *Rotwein P., Kajimoto Y.;
"Structure of the chicken insulin-like growth factor I gene reveals conserved promoter elements.";
J. Biol. Chem. 266:9724-9731(1991).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=91106695; PubMed=2272467;
                                                                                                                                                                                                                                                                                                                                                                                              insulin family;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FUNCTION: The insulin-like growth factors, are structurally and functionally related much higher growth-promoting activity.

SUBCELLULAR LOCATION: Secreted.

SIMILARITY: Belongs to the insulin family.
                                                        109 CAPIKPPKSARSVRAQRHTDMPKAQK----EVH----LKNTSRGNT 146
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                                                                        CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGST 106
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DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Insulin family; of SIGNAL 1
PROPEP ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
DOMAIN
DOMAIN
Kida S., Iwaki M., Nakamura A., Miura Y., Takenaka A., Takahashi S. Noguchi T.;
"Insulin-like growth factor-I messenger RNA content in the oviduct Japanese quail (Coturnix coturnix japonica): changes during growth and development or after estrogen administration.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROPEP
CHAIN
                                       MEDLINE=95187621;
Kida S., Iwaki M.,
                                                           SEQUENCE FROM N.A.
                                                                                                Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archesauria; Aves; Neognathae; Galliformes; Phasianidae; Phasiani
                                                                                                                                                01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence upd
10-OCT-2003 (Rel. 42, Last annotation u
insulin-like growth factor I precursor
                                                                                           Coturnix.
                                                                                                                                (Fragment).
IGF1.
                                                                                                                                                                                                                                                                                                                                                                                                        VARSPLIC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID
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                                                                               _TaxID=93934;
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                                                                                                                                                                                                                                                                                                                                  76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; PR00277; INSULINB.
SM00078; ILGF; 1.
                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                        GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                          GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                                                                                                                                    CAPLKAAKSARSVRAQRHTDMPKAQK 135
                                                                                                                                                                                                                                                                        CVRCKPTKSARSIRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PS00262;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR004825; Ins/IGF/relax
                                                                                                                                                                                                                                                                                                                                                                           57
154 AA;
                                                                                                                                                                                                                                                                                                                                   Conservative
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                                                                                                                                                                                                      STANDARD;
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                                    PubMed=7881819;
PubMed=7881819;
PubMed=7881819;
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BY SIMILARITY.
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/FTIdaVSP 002706.
Missing (In isoform /
/FTIdaVSP 002707.
A -> V (IN REF. 4).
A -> E226CE6AP653CP3F CI
                                                                                                                                                                                                                                                                                                                                             Score 410;
Pred. No. 1
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ion update)
rsor (IGF-I)
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1.5e-37;
1es 9;
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HSSP, P01143; 1GF1.

InterPro, IPRO04825; Ins/IGF,

Pfam, PF00049; Insulin; 1.

PFINTS; PR00277; INSULINB.

SMART; SM00078; I1GF; 1.

PROSITE; PS00262; INSULIN; 1
                                                                                                                                                                                                                                                                                                                                 01-NOV-1990
01-NOV-1990
10-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                           CHICK
IGF1 CHI
P18254;
                                                                                                                                                                                                               Gallus gallus (Chicken).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Tunhomannia: Aves; Neognathae; Galliformes; Phasianidae; Phasiani
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DISULFID
                                                                           "Structure and expression of a chicken precursor.";
                                                                                                                                                                                                                                                                                               IGF1
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DOMAIN
SEQUENCE OF 1-21 F
MEDLINE=91236750;
                                                                                                                   Kajimoto Y.,
                                                                                                                                  MEDLINE=90190648; PubMed=2628728;
                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                  Insulin-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               p. Biochem. Physiol. 109C:191-204(1994).
FUNCTION: The insulin-like growth factors, are structurally and functionally related much higher growth-promoting activity.
SUBCELLULAR LOCATION: Secreted.
SIMILARITY: Belongs to the insulin family.
                                                      Endocrinol. 3:1907-1913(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                CHICK
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(Rel. 16, Last sequence update)
(Rel. 42, Last annotation updat)
growth factor I precursor (IGF)
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                FROM N.A.
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PubMed=2033062
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E PEPTIDE.
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Pred. No. 7.7e-35;
6; Mismatches 17
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INSULIN-LIKE GROWTH FACTOR
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r (IGF-I)
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                                                                                            insulin-like
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to insulin but
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EMBL; S76122; AAD14209.1; -.
PIR; S12672; IGBO1.
HSSP; P01343; IGF1.
InterPro; IPR004825; Ins/IGF/relax.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00277; INSULINB.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                   TIGF1 SHEEP P10763; 01-JUL-1989 01-FEB-1991 10-OCT-2003
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                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
Bovidaa
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PROPEP
                                                                                                                                                                    Bovidae;
                                                                                                                                                                                                                                                        Ovis aries (Sheep)
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TISSUE=Liver;
MEDLINE=90126234;
Wong E.A., Ohlsen
                                                                                                                                                                                                                                                                                                           Insulin-like
                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBCELLULAR LOCATION: Secreted.
SIMILARITY: Belongs to the insulin family.
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SUBCELLULAR LOCATION: Secreted.
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(Rel. 17, Last sequence update)
(Rel. 42, Last annotation update)
e growth factor I precursor (IGF-I)
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  PubMed=2575490;
S.M., Godfredson
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MEDLINE-93221682; PubMed=8466647; Ohlsen S.M., Dean D.M., Wong E.A.; Characterization of multiple transcription ovine insulin-like growth factor-I gene and three alternatively spliced transcripts."; DNA Cell Biol. 12:243-251(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=Coopworth; TISSUE=Liver; 
MEDLINE=9325051; PubMed=8485157; 
Demmer J., Hill D.F., Petersen G.B.; 
"Characterization of two sheep insulin-like 
with different 5'-untranslated regions."; 
Biochim. Biophys. Acta 1173:79-80(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Cloning of ovine insulin-like growth factor-I cDNAs: heterogeneity in the mRNA population."; DNA 8:649-657(1989).
[2]
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SEQUENCE FROM N.A.
TISSUE-Liver;
                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
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MEDLINE-89136887; PubMed=2537174;
Francis G.L., McNeil K.A., Wallace
"Sheep insulin-like growth factors
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SEQUENCE FROM N.A.
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Dickson M.C., Saunders J.C., Gilmour R.S.;
"The ovine insulin-like growth factor-I gene:
expression and identification of a putative pressure of the property of the propert
      EMBL;
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Hey A.W., Browne C.A., Simpson R.J., Thorburn
"Simultaneous isolation of insulin-like growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Endocrinology 124:1173-1183(1989).
[6]
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SUBCELLULAR LOCATION: Secreted.
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chim. Biophys. Acta 997:27-35(1989)
FUNCTION: The insulin-like growth
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AAA80533.1; --
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EMBL; X52388; CAA36617.1; -
EMBL; X52077; CAA36296.1; -
EMBL; M31175; AAA31043.1; A
EMBL; X17638; CAA35632.1; -
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Insulin-like growth
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J. Mol Endocrinol. 11:201-211(1993).
-i- FUNCTION: The insulin-like growth factors, i are structurally and functionally related to much higher growth-promoting activity.
-i- SUBCELIULAR LOCATION: Secreted.
-i- SUBILARITY: Belongs to the insulin family.
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MEDLINE=94128209; PubMed=8297476;
Weller P.A., Dickson M.C., Huskis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tavakkol A., Simmen F.A., Simmen R.C.M., "Porcine insulin-like growth factor-I (pIGF-I): complementary deoxyribonucleic acid cloning and uterine expression of messenger ribonucleic acid encoding evolutionarily conserved IGF-I peptides Mol. Endocrinol. 2:674-681(1988).
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Simmen F.A., Simmen R.C.M.;
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PRINTS; PR00277; INSULINB.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN;
                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 2-154 FROM N.A.

MEDILINE=90175014; PubMed=2308858;

Fotsis T., Murphy C., Gannon F.;

Fuclectide sequence of the bowine
(IGF-1) and its IGF-1A precursor.";

Nucleic Acids Res. 18:676-676(1990)
                                                                                                                                                                                                                 SEQUENCE OF 50-119 FROM N.A.

MEDLINE=95172127; PubMed=7867698;
Schmidt A., Einspanier R., Amselgruber W.,
"Expression of insulin-like growth factor:
oviduct during the oestrous cycle.";
exp. Clin. Endocrinol. 102:364-369(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
Bovidae; Bovinae; B
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SEQUENCE OF 50-119.
MEDLINE=88268820; Pu
Francis G.L., Upton
                                                                        cross-reactivities.";
J. Biol. Chem. 261:569-575(1986)
                                                                                                          serum. Purification,
                                                                                                                           "Insulin-like growth
                                                                                                                                                              MEDLINE=86085881;
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951457;

91-0CT-1996 (Rel. 34, Created)

16-0CT-2001 (Rel. 40, Last sequence update)

15-MAR-2004 (Rel. 43, Last annotation update)

15-MAR-11ike growth factor I precursor (IGF-I)
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Bovidae; Caprinae; Capra
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
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FUNCTION: The insulln-like growth factors, is are structurally and functionally related to much higher growth-promoting activity.
SUBCELIDUAR LOCATION: Secreted.
TISSUB SPECIFICITY: Expressed in all tissues lung, liver, spleen, uterus, ovary, testis, h
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PIR; PN0622; PN0622.
HSSP; P01343; LGF1.
InterPro; IPR004825; Ins/IGF/relax.
Pfam; PF00049; Insulin; 1.
Pfam; PF00049; INSULINB.
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata,
Mammalia, Eutheria, Carnivora, Fissipedia, Canidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
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SIMILARITY: Belongs to the insulin family.
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(Rel. 28, Last sequence update)

(Rel. 42, Last annotation update)

growth factor I precursor (IGF-I) (Somatomedin)
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-!- SIMILARITY: Belongs to the insulin family.

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Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;
"Location of disulphide bonds in human insulin-like growth factors
(IGFs) synthesized by recombinant DNA technology.";
Biomed. Environ. Mass Spectrom. 16:3-8(1988).
-!- FUNCTION: The insulin-like growth factors, isolated from plasma, are structurally and functionally related to insulin but have a much higher growth-promoting activity.
-!- SUBCELIULAR ICCATION: Secreted.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yasuda T., Kobayashi Y.;
Yasuda T., Kobayashi Y.;
Yasuda T., Kobayashi Y.;
"1H-NMR assignment and secondary structure of human insulin-like
growth factor-I (IGF-I) in solution.";
J. Biochem. 111:529-536(1992).
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MEDLINE=92316903; PubMed=1319992;
Sato A., Nishimura S., Chkubo T.,
Yasuda T., Kobayashi Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=91242464; PubMed=2036417; Cooke R.M., Harvey T.S., Campbell I.D.; Cooke R.M., Harvey T.S. man insulin-like growth factor 1: a nuclear "Solution structure of human insulin-like growth factor 1: a nuclear magnetic resonance and restrained molecular dynamics study."; Biochemistry 30:5484-5491(1991).
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"Tertiary structures, receptor
insulinlike growth factors.";
Fed. Proc. 42:2592-2597(1983).
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3D-STRUCTURE MODELING.
MEDLINE=83210259; PubMed=6189745;
Medarkar S., Humbel R.E.;
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Sussenbach J.S.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=91207342;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
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                                                                                   Event=Alternative Name=IGF-IA;
                             Name=IGF-IB;
                                                      IsoId=P01343-1;
IsoId=P05019-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mol. Brain Res. 12:275-277(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          195:179-184(1986)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Res.
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                                                                                                                    splicing; Named isoforms=2;
Sequence=External;
                                                      Sequence=Displayed;
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MIM; 147440;
MIM; 265850;
GO; GO:000515
GO; GO:000553
GO; GO:000692
GO; GO:000944
GO; GO:000751
GO; GO:000751
GO; GO:000721
GO; GO:000721
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EMBL; X03421; C

EMBL; X03422; C

EMBL; X57025; I

EMBL; I

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EMBL; M12659;
EMBL; M14153;
EMBL; M14154;
EMBL; X00173;
EMBL; X03563;
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SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; 3D-structure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR004825; Ins/IGF/relax.
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                        Alternative splicing;
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GO:0005180; F:peptide hormone; TAS.
GO:0006528; p:cell motility; TAS.
GO:0006260; p:DNA replication; TAS.
GO:000260; p:DNA replication; TAS.
GO:000717; P:muscle development; TAS.
GO:0007817; P:muscle development; TAS.
GO:0008284; p:positive regulation of cell proliferation; TAS.
GO:0008284; p:positive regulation of TAS.
GO:0007165; p:RAS protein signal transduction; TAS.
GO:0007165; p:signal transduction; TAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO:0007165; P:signal tr
GO:0001501; P:skeletal
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02-OCT-02
02-OCT-02
02-JUL-02
25-JUL-02
25-JUL-02
03-OCT-01
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15-APR-93
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CAA27152.1;
CAA27153.1;
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    C6ECD92DCA9B37BC
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Matches 81
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01-AUG-1990
01-AUG-1990
10-OCT-2003
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SIGNAL
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PRINTS; PR00277; INSULINB.
SMART; SM00078; IlGF; 1.
PROSITE; PS00262; INSULIN; 1.
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GO; GO:0010001; P:glial cell differentiation;
GO; GO:0007399; P:neurogenesis; IMP.
InterPro; INDO44225; IMP.
InterPro; INDO44225; IMP.
InterPro; INDO44225; IMP.
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                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.

TISSUE=Pancreas;

MEDLINE=90332447; PubMed=2377480;

Bell G.I., Stempien M.M., Fong N.M., Scino S.;

"Sequence of a cDNA encoding grinea pig IGF-I.";

"Nucleic Acids Res. 18:4275-4275(1990).

-!- FUNCTION: The insulin-like growth factors, isolated fare structurally and functionally related to insulin much higher growth-promoting activity.

-!- SUBCELLUIAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cavia porcellus (Guinea pig).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
   EMBL;
PIR; S
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                                                                                                                                                                                                                                                                                                                  SIMILARITY: Belongs to the insulin family.
                                                                                                                                                                                                                                                                                                                                          much higher
SUBCELLULAR
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S12719; I
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(Rel. 15, Last sequence update)
(Rel. 42, Last annotation updat
growth factor I precursor (IGF
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70 B.

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Pred.
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Hystricognathi; Caviidae; Cavia.
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No. 6.
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r (IGF-I)
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.6e-41;
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have a
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Best Local Similarity
Matches 78; Conserv
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MEDILINE=84068210; PubMe
Jansen M., van Schaik F
Gabbay K.H., Nussbaum A
"Sequence of cDNA encod
precursor";
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                                                                                     MEDLINE=86108910; PubMed=2935423;
le Bouc Y., Dreyer D., Jaeger F.,
"Complete characterization of the
isolated from a newly constructed
PEBS Lett. 196:108-112(1986).
                                                                                                                                                                                                                                                                                                                                                             "Organization and sequence of the human in gene. Alternative RNA processing produces factor I precursor peptides.", J. Biol. Chem. 261:4828-4832(1986).
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SEQUENCE FROM N.A.
MEDLINE=86108862; PubMedde Pagter-Holthuizen P.,
van Ommen G.J.B., Bouma 1
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MEDLINE=86168194; PubMed=2937782;
Rotwein P., Pollock K.M., Didier D.K.,
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Mammalia; Eutheria;
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IGF1 OR IBP1.
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S; PR00277; INSULINB.
; SM00078; IIGF; 1.
TE; PS00262; INSULIN;
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 PubMed=3002851;
zen P., van Schaik F.M.A., Verduijn
Bouma B.N., Jansen M., Sussenbach J
                                                                                                                                                                                                                                                  PubMed=6358902;
haik F.M.A., Ricker A.T., Bul
baum A.L., Sussenbach J.S., v
encoding human insulin-like
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EMBL; X06043; CAA29436.1; -.
EMBL; M15647; AAA41215.1; JOINED.
EMBL; M15648; AAA41215.1; JOINED.
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EMBL; M15649; AAA41287.1; -.
EMBL; M17335; AAA4386.1; ALT INIT.
EMBL; M17335; AAA4387.1; ALT_INIT.
EMBL; M15481; AAA4387.1; ALT_INIT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tamura K., Kobayashi M., Ishii Y., Tamura T., Nakamura S., Niwa M., Zapf J.; "Primary structure of rat insulin-like growth biological activities."; J. Biol Oham Oram
                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
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Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.;
"Structure of the rat insulin-like growth factor II transcriptional unit: heterogeneous transcripts are generated from two promoters by use of multiple polyadenylation sites and differential ribonucleic acid splicing.";
               PIR;
HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=87246437; PubMed=359538;
Murphy L.J., Bell G.I., Duckworth M.L., Friesen H.G.;
"Identification, characterization, and regulation of a rat
complementary deoxyribonucleic acid which encodes insulin-like growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIJINE=91103966; PubMed=1368571; Kato H., Okoshi A., Miura Y., Noguchi T.; "A new cDNA clone relating to larger molecular insulin-like growth factor-I mENA."; Agric. Biol. Chem. 54:1599-1601(1990).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=88003970; PubMed=3652906; Casella_S.J., Smith E.P., van Wyk J.J.,
                                                                                                                                                                                              or send an email to license@isb-sib.ch).
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[2]
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FUNCTION: The insulin-like growth factors, are structurally and functionally related much higher growth-promoting activity.
SUBCELLULAR LOCATION: Secreted.
ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                             SIMILARITY: Belongs to the insulin family.
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Name=IGF-IA;
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Beil G.I., Stemplen M.M., Fong N.M.,
"Sequences of liver cDAss encoding to
growth factor I precursors.";
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Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                          much higher growth-promoting SUBCELLULAR LOCATION: Secrete ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       leic Acids Res. 14:7873-7882(1986). FUNCTION: The insulin-like growth factors, are structurally and functionally related
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                                                                                                                                                                                                                                                                                                                                                                                   Event=Alternative
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VARIANT ASP-187.

MEDLINE-99318093; PubMed=10391209;

Cargill M., Altshuler D., Ireland J., Sklar P.,
Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., N
Shaw N., Lane C.R., Warrington J., Lipshutz
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Raschdorf F., Dahinden R., Maerki W., Richter W.J.,
"Location of disulphide bonds in human insulin-like
(IGFs) synthesized by recombinant DNA technology.";
Biomed. Environ. Mass Spectrom. 16:3-8(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sato A., Nishimura S., Ohkubo T., Kyog
Yasuda T., Kobayashi Y.;
"1H-NMR assignment and secondary struc
growth factor-I (IGF-I) in solution.";
J. Biochem. 111:529-536(1992).
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ALTERNATIVE PRODUCTS:
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Shimatsu A., Rotwein P.;
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Sciurognathi; Muridae;
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Murinae; Rat
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RESULT 3
IDF1_RABIT
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Q95222; 018846;
01-NOV-1997 (Rel
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See lor send an email to license@isb-sib.ch).
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Submitted
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AF022961; AA
HSSP; P01343; 1GF1
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    SEQUENCE
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16-OCT-2001 (Rel. 40, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Insulin-like growth factor I precursor (IGF-I)
                                                                                                                                                                                                                                                                     Insulin
                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR004825; Ins/IGF/relax.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IsoId=Q95222-2; Sequence=VSP_002705;
SIMILARITY: Belongs to the insulin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Event-Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109
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S; PR00277; INSULINB.
; SM00078; IlGF; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IsoId=Q95222-1; Sequence=Displayed
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BY SIMILARITY.
BY SIMILARITY.
YOPPSTWKOMKSORRKGSTFEEHK -> EVHLKNTSRGSA
GNKNYRM (in isoform IGF-IA).
/FTId=VSP_002705.
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    819AF577800A1B1A CRC64;
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SEQUENCE OF 22-50 FROM N.A.
SEQUENCE OF 22-50 FROM N.A.
MEDLINE=84295593; PubMed=6382022;
MEDLINE=84295593; PubMed=842959; PubMed=8
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13-AUG-1987
10-CCT-2003
                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=78130171; PubMed=632300;
Rinderknecht E., Humbel R.E.;
"The amino acid sequence of human insulin-like
its structural homology with proinsulin.";
J. Biol. Chem. 253:2769-2776(1978).
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Rotwein P., Pollock K.M., Didier D.K.,
"Organization and sequence of the human gene. Alternative RNA processing production of the processing production of the process of the process
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Mammalia; Eutheria;
                                                                                                                      Blundell T.L., Bedarkar S., Humbel R.E. "Tertiary structures, receptor binding, insulinlike growth factors."; Fed. Proc. 42:2592-2597(1983).
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"Organization of the
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    STRUCTURE BY NMR. MEDLINE=91242464;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PubMed=3002851;
zen P., van Schaik F.M.A., Verduijn G.M.,
Bouma B.N., Jansen M., Sussenbach J.S.;
the human genes for insulin-like growth f
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        PubMed=2036417
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Primates;
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Catarrhini; Hominidae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; X04482;
  Shimatsu A., Rotwein P.;
"Sequence of two rat insulin-like growth within the 5' untranslated region.";
                                                                                                                                                                     SEQUENCE FROM N.A.

MEDLINE=87222423; PubMed=3034909;
Shimatsu A., Rotwein P.;
"Mosaic evolution of the insulin-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PR00277; INSULTS SMART; SM00078; IIGF; 1
                                                 SEQUENCE FROM N.A.
MEDLINE=88015572; PubMed=3658684;
                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                    Rattus norvegicus (Rat)
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IGF1 OR IGF-1
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GG:0010001; P:glial cell differentiation;
GO:0007339; P:neurogenesis; IMP.
erPro; IPR004825; Ins/IGF/relax.
m; PF00049; Insulin; 1.
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3 (Rel. 42, Last anno
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9; AAH12409.1; -.
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Rodentia;
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No. 2e-51;
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; Murinae; Rat
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GPETICGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY

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EMBL; M15648; AAA41214.1; JC
EMBL; M15648; AAA41214.1; JC
EMBL; M15649; AAA41214.1; JC
EMBL; M5649; CAA29480.1; AJ
EMBL; M5610; CAA29480.1; AJ
EMBL; M15480; AAA41385.1; AJ
EMBL; M15480; AAA41380; AAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-89127259, PubMed=3221878;
Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.;
Note that the control of the rat insulin-like growth factor II transcriptional unit: heterogeneous transcripts are generated from two promoters by unit; possible polyadenylation sites and differential ribonucleic acid splicing.";
Nol. Endocrinol. 2:1115-1126(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entities
or send a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  J. Biol. Chem. 264:5616-5621(1989).
-!- FUNCTION: The insulin-like growth factors, are structurally and functionally related much higher growth-promoting activity.
-!- SUBCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS:
                                                                         DISULFID
DISULFID
DISULFID
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                               Insulin
SIGNAL
PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produbetween the Swiss Institute of Bioinformatics the European Bioinformatics Institute. There a use by non-profit institutions as long as i modified and this statement is not removed. Us
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tamura K., Kobayashi M., Ishii Y., Tamu
Nakamura S., Niwa M., Zapf J.;
"Primary structure of rat insulin-like
biological activities.";
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SIMILARITY: Belongs to the insulin f
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Kobayashi M., Ishii Y.,
Niwa M., Zapf J.;
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Copyright (c) 1993 - 2004 Compugen Ltd.
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P01343 homo sapien
P51457 capra hircu
P33712 canis famil
P16545 sus scrofa
P07455 bos taurus
P10763 ovis aries
P51462 coturnix co
P18254 gallus gall
P16501 xenopus lae
P028933 suncus muri
Q03026 cyprinus ca
Q03026 cyprinus ca
Q03026 cyprinus ca
Q17085 oncorhynchu
Q02816 oncorhynchu
P51458 equus cabal
Q02816 oncorhynchu
P51459 equus cabal
P0764 ovis aries
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P23695 sus scrofa
P41694 mustela vis
P10344 homo sapien
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A Gebenjuk V.A., Skorokhod A.S., Anoprienko O.V., Koval A.P.;

B Gebenjuk V.A., Skorokhod A.S., Anoprienko O.V., Koval A.P.;

Submitted (MAY-1998) to the EMBL/GenBank/DDBJ databases.

-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).

-!- SUBCIANTY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

EMBL; AF063216; AAC18833.1; -.

R EMBL; AF063216; AAC18833.1; -.

R HSSP; P01343; 2GF1.

R GO; GO:0005576; C:excracellular; IEA.

R GO; GO:0005576; C:excracellular; IEA.

R GO; GO:0005179; F:hormone activity; IEA.

R GO; GO:0005179; F:hormone activity; IEA.

R GO; GO:0005179; F:hormone activity; IEA.

R GO; GO:0005179; T:normone activity; IEA.

R GO; GO:0005179; T:normone activity; IEA.

R FINETERO (IFRO4825; Ins/IGF/relax.)

PF00049; Insulin; 1.

P DDTMTC. DDDA077. TNUTH.INR
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SMART; SM00078; IIGF; 1.
PROSSITE, PS00262; INSULIN; 1.
SEQUENCE 188 AA; 20792 MW;
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Koval A., Kulik V., Duguay S., Plisetskaya E., Adamo M.L.,
Kovat A., Kulik V., Duguay S., Plisetskaya E., Adamo M.L.,
Roberts C.T.Jr., Leroith D., Kavsan V.;
"Characterization of a salmon insulin-like growth factor I promoter.";
DNA Cell Biol. 13:1057-1062(1994).
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MEDLINE=94296559; PubMed=8024699;

Kavsan V.M., Grebenjuk V.A., Koval A.P., Skorokhod A.S.,

Roberts C.T.Jr., Leroith D.;

"Isolation of a second nonallelic insulin-like growth factor I gene
from the salmon genome.";

DNA Cell Biol. 13:555-559(1994).
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Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;
Nucleotide sequence and tissue distribution of three insu
growth factor I prohormones in salmon.";
Mol. Endocrinol. 6:1202-1210(1992).
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; M81904; AAA18211.1; -..
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01-NOV-1996 (TrEMBLrel. 24, Last sequence update)
01-UNV-2003 (TrEMBLrel. 24, Last samotation update)
1nsulin-like growth factor I precursor (Fragment).
Salmo salar (Atlantic salmon).
Eukaryota, Metazoa, Chordata, Craniata; Vertebrata; Eutatinopterygii, Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
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GO:0005179; F:hormone activity; IEA.
GO:0007592; F:hysiological processes;
erPro; IPR004825; Ins/IGF/relax.
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                                                                                                                                                                                                               CVRCKPTKSARSIRAORHTDMPKTQKSQPLSTHKKRKLQRR 101
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                                                                                                                                                                    CAPVKSGKAARSVRAQRHTDMPRTPKVSTAVQNVDRGTERR
                                                                                                                                                                                                                                                              GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY
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18 P
>88 II
145
15885 MW;
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                                                                                                                                                                                                                                                                                                                                                         9;
                                                                                                                                                                                                                                                                                                                                                       Score 361; DB Pred. No. 3.6e 9; Mismatches
  Created)
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Pred. No. :
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INSULIN-LIKE GROWTH FACTOR
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Best Local S
Matches 68
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CHAIN
CONFLICT
NON TER
SEQUENCE
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MEDINE-3024477; PubMed=1406698;

Nuguay S.J, Park L.K., Samadpour M., Dickhoff W.W.;

Duguay S.J, Park L.K., Samadpour M., Dickhoff W.W.;

Nucleotide sequence and tissue distribution of three
growth factor I prohormones in salmon.";

Nol. Endocrinol. 6:1202-1210(1922).

-i- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).

-i- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAM
EMBL; M81913; ARA49413.1; -.

FIR; C44012; C44012.

PIR; C44012; C44012.

G0; G0:0005576; C:extracellular; IEA.
G0; G0:0005179; F:hormone activity; IEA.
G0; G0:0005179; F:hormone activity; IEA.
G0; G0:0005179; F:hormone activity; IEA.
InterPro; IPR004825; Ins/IGF/relax.
                                                                                                                                 U1-AUG-1998 (TrEMBLrel. 07, C1
01-AUG-1998 (TrEMBLrel. 07, La
01-JUN-2003 (TrEMBLrel. 24, La
Insulin-like growth factor I p:
IGF-I.1.
Oncorhynchus keta (Chum salmon).
Eukaryota; Metazoa; Chordata; Craniata;
Actinopterygii; Neopterygii; Teleostei;
Protacanthopterygii; Salmoniformes; Salm
NCBI TaxID=8018;
[1]
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01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Insulin-like growth factor I precursor (Fragment).
Oncorhynchus kisutch (Coho salmon).
Sukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_TaxID=8019;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=90190659; PubMed=2628735; Cao Q.P. Duguay S.J. Plisetskaya E., Steiner D.F., Chan S.J.; Cao Q.P. Duguay S.J. Plisetskaya E., Steiner D.F., Chan S.J.; "Nucleotide sequence and growth hormone regulated expression of salmon insulin-like growth factor I mRNA."; mol. Endocrinol. 3:2005-2010(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00049; Insulin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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SM00078; IIGF; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRR
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nilarity 67.3%;
Conservative
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INSULIN-LIKE GROWTH
R -> X (IN REF. 1).
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9; Mismatches
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Pred. No. 3
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                                                Salmonidae; Oncorhynchus
                                                                                                                                                                                                                                                                                      188
                                                                 Euteleostei
                                                                                           Vertebrata; Euteleostomi;
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Best Local S
Matches 71
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SEQUENCE FROM N.A.
STRAIN=Big Qualitum River; TISSUE=Liver;
MEDLINE=93247592; PubMed=7683374;
Neallis A.E., Devlin R.H.;
Duplicate insulin-like growth factor-I ge
I "Duplicate insulin-like growth factor-I ge
I alternative splicing pathways.";
Nol Endocrinol. 7:409-422(1993).
                                                                                                                                                                  01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-UNV-2003 (TrEMBLrel. 24, Last annotation update)
01-UNI-2003 (TrEMBLrel. 24, Last annotation update)
Insulin-like growth factor I precursor (Fragment).
Salmo salar (Atlantic salmon).
Eukaryota, Metazoa, Chordata; Craniata; Vertebrata; Eulectinopterygii; Neopterygii; Teleostei; Buteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
NCBL TaxID-8030;
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Q91476;
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-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; U15961; AAA67267.1; --
PIR; C54270; C54270.
HSSP; P01343; 2GF1.
GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005179; F:hormone activity; IEA.
GO; GO:0007582; P:physiological processes; IEA.
InterPro; IPR004825; Ins/IGF/relax.
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01-NOV-1996 ('
01-NOV-1996 ('
01-JUN-2003 ('
Insulin-like '
IGF-I.
MEDLINE=93024477; PubMed=1406698; Dickhof Duguay S.J., Park L.K., Samadpour M., Dickhof "Nucleotide sequence and tissue distribution growth factor I prohormones in salmon.";
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PRINTS; PR00277; INSULINB.
SMART; SM00078; IIGF; 1.
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Devlin R.H.
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161 AA; 17763 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            River; TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   66.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ne EMBL/GenBank/DDBJ databases.
SECRETED (BY SIMILARITY).
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Pred. No. 2.6e
.1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                           117
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                                                   Dickhoff W.W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            on) (King salmon).
   Vertebrata; Euteleostomi;
   Euteleostei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         genes
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                           of three
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                                                                                                                                                                                                                                                        Euteleostomi;
                           insulin-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     150
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RESULT
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P SEQUENCE FROM N.A.

A Vong Q.P., Chan K.M., Cheng C.H.K.;

Vong Q.P., Chan K.M., Cheng C.H.K.;

T "Common carp insulin-like growth factor-I gene: Genomic organ

T and functional characterization of the 5'-flanking region.";

Submitted (JAN-2002) to the EMBL/GenBank/DBBU databases.

C -!- SUBSELLULAR LOCATION: SECRETED (BY SIMILARITY).

-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

R EMBL; AF46583974; AAB37702.2; -

R EMBL; AF4658397 AAP78926.1; -

R HSSP; D01343; 2GF1.

R GG; GG:0005176; C:extracellular; IEA.

GG; GG:0005179; F:hormone activity; IEA.

R GG; GG:0005179; F:hormone activity; IEA.

R GG; GG:0005179; T:hysiological processes; IEA.

R InterPro, IPR004825; Ins/IGF/relax.

R InterPro, IPR004825; Ins/IGF/relax.

R PAINTS; PR00277; INSULINB.

R SMART; SM00078; ILGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 69
                                                                                                                                                                                                                                                                             MEDLINE=96241923; PubMed=8680527;
Liang Y.H., Cheng C.H., Chan K.M.;
"Insulin-like growth factor IEa2 is the predominantly
of IGF in common carp (Cyprinus carpio).";
Mol. Mar. Biol. Biotechnol. 5:145-152(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9IBIO;
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NON TER
SIGNAL
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                      дикатуоца; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes; Cyprinidae; Cyprinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation updat
Insulin-like growth factor I subtype Ea2.
IGF-IEA2 OR IGF-I.
Cyprinus carpio (Common carp).
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cyprinus carpio (Common carp)
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART; SM
PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mol. Endocrinol. 6:1202-1210(1992).
-!- SUBCELLULAR LOCATION: SECRETED
-!- SIMILARITY: BELONGS TO THE INSU
EMBL; MB1904; APA18212.1; -.
HSSP; P01343; 2GF1.
GO; GO:0005576; C:extracellular; IE
                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
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PRINTS; PR00277; INSULINB.
SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30; GO:0005576; C:extracellular; IEA.
30; GO:0005179; F:hormone activity; IEA.
30; GO:0007582; P:physiological processes;
30; GO:0007582; P:physiological processes;
InterPro; IPR004825; Ins/IGF/relax.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CVRCKPTKSARSIRAQRHTDMPKTQKSQPLS--THKKRK
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<1
19
117 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1
18
88
12867
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TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 362;
Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL.
INSULIN-LIKE GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A97666EE2F526EAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
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... IEA.
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                                                                                                                                                                                                                        Genomic organization
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SQ
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Best Local S
Matches 77
                                                                                                                                                     GO; GO:0005576; C:extracellu
GO; GO:000803; F:growth fad
GO; GO:0005179; F:hormone ac
GO; GO:0007582; P:physiologi
Interpro; IPR00425; Ins/IGI
PRINTS; PR00277; INSULINB.
SMART; SM00078; IIGF; L:
PROSITE; PS00262; INSULIN;
      SIGNAL
PROPEP
CHAIN
DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                   HSSP;
                                                                                                                                                                                                                                                                                                                                                   EMBL; U28070;
EMBL; U85271;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=97013467; PubMed=8860303;
Otte K., Rozell B., Gessbo A., Engstrom W.;
"Cloning and sequencing of an equine insulin-like
and its expression in fetal and adult tissues.";
Gen. Comp. Endocrinol. 102:11-15(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART; SMC0078; IIGF; 1.
PROSITE; PS00262; INSULIN;
NON_TER 1 1
SEQUENCE 133 AA; .14674 N
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01-OCT-2000 (TrEMBLrel. 15, La
01-JUN-2003 (TrEMBLrel. 24, La
Insulin-like growth factor IB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Equus caballus (Horse).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P79167
                                                                                                                                       Insulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 1-122 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9796;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Vixon A
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                                                                                                                                                                                                                     GO:0005576; C:extracellular; IEA.
GO:0008083; F:gyrowth factor activity; IEA.
GO:0005179; F:hormone activity; IEA.
GO:0007582; P:physiological processes; IEA
erPro; IPR004825; Ins/IGF/relax.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UENCE OF 123-139 FROM N.A.

On A.J., Toland B.D., Sandell L.J.;
mitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED I
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBCELLULAR LOCATION: SECRETED. ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Name=IGF-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Event=Alternative
                                                                                                                                                                                                                                                                                                                                   P01343;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           IsoId=P79167-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                      IsoId=P51458-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       89
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAPIKPAKSARSVRAQRHTDMPKAQK 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CVRCKPTKSARSIRAQRHTDMPKTQK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               133 AA; _14674 MW;
                                                                                                                                                                                                                                                                                                                          ; AAA68952.1; -.; AAB47484.1; -.; 2GF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
         44
74
90
90
      Growth
7
48
118
77
89
110
                                                                                                                                                            INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata; Craniata; Vertebrata;
Perissodactyla; Equidae; Equus.
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                                                                                                                                                                                                                                                                                                                                                                                               Sequence=External;
GS TO THE INSULIN/IGF/RELAXIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      splicing; Named isoforms=2;
                                                                                                                                     factor;
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Last sequence update)
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IB precursor (IGF-IB) (Somatomedin
BY SIMILARITY.
INSULIN-LIKE G
B.
C.
A.
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Pred. No. 5e-42;
1; Mismatches
                                                                                                                                     Signal; Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A6991DBCB75C103B CRC64;
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                                                                       GROWTH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 133;
                                                                       FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AF074980; AAC26006.1; -.
HSSP; P01343; 2GF1.
GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005179; F:bormone activity; IEA.
GO; GO:0007582; P:physiological processes; II
InterPro; IPR004825; Ins/IGF/relax.
Pfam; PF00049; Insulin; 1.
PRIN'S; PR00277; INSULINB.
SMART; SM00078; IIEF; 1.
                                                                                                                                                                                                                                                                                                                                                     SMART; SM
PROSITE;
Signal.
SIGNAL
CHAIN
SEQUENCE
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STRAIN-Big 6 ML Tom; TISSUE-Liver;

Czerwinski S.M., Ashwell C.M., McMurtry J.P.;

Czerwinski S.M., Ashwell C.M., McMurtry J.P.;

"Cloning of turkey insulin-like growth factor-I (IGF-I).";

Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.

-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).

-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

EMBL; AP074980; AAC26006.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1998
01-NOV-1998
01-JUN-2003
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Eukaryota; Metazoa; Chordata; Craniata; Ver
Archosauria; Aves; Neognathae; Galliformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9103;
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                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                         GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                   CVRCKPTKSARSIRAORHTDMPKTQKSQPLSTHKKRKLQRRRKGST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PS00262; INSULIN;
CAPIKPPKSARSVRAQRHTDMPKAQ-
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8 (TrEMBLrel. 08, L.
3 (TrEMBLrel. 24, L.
ke growth factor-I)
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153 AA;
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                                                                                                                                                                                                                               Score 384; DB 13; Pred. No. 6.7e-38; 7; Mismatches 17
                                                                                                                                                                                                                                                                                                                                                     POTENTIAL.
INSULIN-LIKE GROWTH
SAF1E5B8D13C70B5 (
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Pred. No. 4.3e-40;
2; Mismatches 10
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mes; Phasianidae; Meleagris.
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CRC64;
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                                                                                                                                                                                                                                                                                        Length 153;
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DT 
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Q14620;
Q1-NOV-1996
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Q9NP10;
01-OCT-2000
01-OCT-2000
01-JUN-2003
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GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005179; F:hormone activity; IEA.
GO; GO:0007582; P:physiological processes;
InterPro; IPR004825; Ins/IGF/relax.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rall L.B., Scott J., Bell G.I.;
"Human insulin-like growth factor I and II messenger RNA:
"Complementary DNA and analysis of expression.";
Meth. Enzymol. 146:239-248(1987).
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                       IGF1.
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; M29644; AAA52543.1; -. HSSP; P01343; 2GF1.
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Mammalia; Eutheria;
    Eukaryota;
                                                                    Insulin-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
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MEDLINE=88065102; PubMed=3683205;
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S; PR00277; INSULINB.
; SM00078; IlGF; 1.
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81; Conservative
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26
130 /
  ns (Human)
Metazoa;
                                                                  (Tremblrel. 01, (Tremblrel. 01, (Tremblrel. 24, e growth factor I
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                                                                                                                                                                                  PRELIMINARY;
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Primates;
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    Chordata;
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15,
24,
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Last seg
Last ann
                                                                Last sequence update)
Last annotation update)
I precursor.
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                                                                                                                                       Created)
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POTENTIAL.
; 970FBAAECFA0352D CRC64;
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1; Mismatches 4
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    Craniata;
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1.2e-42;
7;
    Vertebrata;
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    Euteleostomi;
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RESULTI
OPERATOR OF THE CONTROL OF T
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C -I- SUBCELULAR LOCATION: SECRETED (BY SIMILARITY).

C -I- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

R EMBL; M37484; AAA52789.1; -.

R PIR; A36552; A36552.

R HSSP; PD1343; ZGF1.

R GO; GO:0005576; C:extracellular; IEA.

R GO; GO:0005179; F:hormone activity; IEA.

R GO; GO:0007512; P:physiological processes; IEA.

R GO; GO:000752; P:physiological processes; IEA.

R GO; GO:000752; P:physiological processes; IEA.

R GO; GO:000752; P:physiological processes; IEA.

R GO; GO:0007527; T:BULINB.

R Pfam; PF00049; Insulin; 1.

R Pfam; PF00049; Insulin; 1.

R PFANT; SM00078; I1GF; 1.

R PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
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01-OCT-2000
01-OCT-2000
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SEQUENCE
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SIGNAL
                  GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005179; F:hormone activity; IEA.
GO; GO:0007582; P:physiological processes;
InterPro; IPR004825; Ins/IGF/relax.
Pfam; PF00049; Insulin; 1.
                                                                                                                                -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN
EMBL; AF210387; AAF72409.1; --
EMBL; AF210386; AAF72409.1; JOINED.
EMBL; AF210386; AAF72409.1; JOINED.
EMBL; AF210386; AAF72409.1; JOINED.
HSSP; P01343; 2GF1.
                                                                                                                                                                                                                     "A primary section.";
affecting twinning rate.";
Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.

**TOTELLULAR LOCATION: SECRETED (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                             Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Bute: Mammalia; Butheria; Cetartiodactyla; Ruminantia; Pecora; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                [1]
SEQUENCE FROM N.A.
MEDLINE=91187000; PubMed=2082190;
Tobin G., Yee D., Brunner N., Rotwein P.;
"A novel human insulin-like growth factor
"A normal and tumor cells.";
                                                                                                                                                                                                                                                                                                               Lien S., Karlsen A., Klemetsdal Klungland H., Aasland M., Hering "A primary screen of the bovine
                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bos taurus (Bovine)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9N1C1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Insulin-like
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33
137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TIEMBLrel. 15, Created)
(TIEMBLrel. 15, Last sequence update)
(TIEMBLrel. 24, Last annotation update growth factor I (Fragment).
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137 I
; 15177 MW;
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d M., Heringstad
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Pred. No. 1.
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INSULIN-LIKE GROWTH
BFCCOD11E32AB75D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                           l G., Vage D.
ngstad B., Ru
ngenome for
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                                                                                                                                                                                                                                                                                                             D.I., Olsaker I.,
Ruane J., Gomez-Raya
or quantitative trait
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Gaps

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Best Local S
Matches 94
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P97899;
P97899;
O1-MAY-1997 (TrEMBLrel. 03, C
01-MAY-1997 (TrEMBLrel. 03, I
01-JUN-2003 (TrEMBLrel. 24, I
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Q13429;
01-NOV-1996
                                                                        Rattus sp.
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; Pf00049; Insulin; 1.
PRINTS; PR00277; INSULINB.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
NON TER
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HSSP; P01343; 2GF1.
GO; GO:0005576; C:extracellular; IE/
GO; GO:0005179; F:hormone activity;
GO; GO:0007582; P:physiological proc
InterPro; IPR004825; Ins/IGF/relax.
    PARTIAL SEQUENCE FROM N.A.
MEDLINE=87222423; PubMed=3034909;
                                                     NCBI_TaxID=10118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
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01-JUN-2003
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                                                                              Chordata;
Rodentia;
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Primates;
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Pred. No. 3.3e-
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Catarrhini;
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Best Local S
Matches 82
EMBL; AKO81019; BAC38117.1; -.

MGD; MGI:2444166; C730016909R1k.

GO; GO:0005576; C:extracellular; IEA.

GO; GO:0005179; F:hormone activity; IEA.

GO; GO:000519; F:hormone activity; IEA.

GO; GO:0007582; P:physiological processes; IE,

GO; GO:00040825; Ins/IGF/relax.

Pfam; PF00042; Insulin; 1.

PRINTS; PR00277; INSULINB.

SMART; SM00078; 1IGF; INSULIN; 1.

PROSITE; PS00262; INSULIN; 1.

SEQUENCE 153 AA; 17093 MW; 967596AEACOCA3
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HSSP, D01343; 2GF1.
G0; G0:0005576; C:extracellular; IEA.
G0; G0:0005775; F:bormone activity; II
G0; G0:0007582; P:physiological process
InterPro; IPR004825; Ins/IGF/relax.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00277; INSULINB.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
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"A new cDNA clone relating to
"A new conth factor-I mRNA.";
Agric. Biol. Chem. 54:1599-1.
Agric. Biol. Chem. 54:1599-1.
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Eukaryota; Metazoa;
Mammalia; Eutheria;
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"Mosaic e
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Nature 420:563-573(2002).
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STRAIN=C57BL/6J; TISSUE=Cerebellum;
MEDLINE=22354683; PubMed=12466851;
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82; Conservative
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evolution of the insulin-like
. Chem. 262:7894-7900(1987).
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Rodentia;
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Pred. No. 4.8e-45;
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                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                362.54
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1: sp_archea:*

2: sp_bacteria:*

3: sp_fungi:*

4: sp_human:*
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Query
Match
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Copyright (c) 1993 - 2004 Compugen Ltd.
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Q8car0 mus musculu
Q13429 homo sapien
P97889 rattus sp.
Q8c4u6 mus musculu
Q9np10 homo sapien
Q14620 homo sapien
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Q9n1c1 bos taurus
P79167 equus cabal
C93380 meleagris s
Q91230 oncorhynchu
Q91476 salmo salar
Q91b10 cyprinus ca
Q91475 salmo salar
Q91162 oncorhynchu
P81268 oncorhynchu
P81268 oncorhynchu
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### ALIGNMENTS

Query Match 84.3%; Score 505; DB 11; Length 165 Best Local Similarity 91.3%; Pred. No. 2.5e-52; Matches 95; Conservative 2; Mismatches 7; Indels	DR SMAKT; SMUUU/8; 11GF; 1. DR PROSITE; PS00262; INSULIN; 1. SQ SEQUENCE 165 AA; 18473 MW; 2CEOD3DA981C93F8 CRC64;	<pre>DR InterPro; IPR004825; Ins/IGF/relax. DR Pfam; PF00049; Insulin; 1.</pre>	8 5	MGD	60,770 full-length cDNAs.";	"Analysis of the mouse transcriptome based on functional	the RIKEN Genome Exploration Research Group Phase I & II			NCBI TaxID=10090;	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;		Unknown EST.	(TrEMBLrel, 25, Last	01-MAR-2003 (TramBirel, 23,	DT 01-MAR-2003 (Trambirel 23 Created)	 QBCARO	RESULT 1
Length 165; Indels 0; Gaps	RC64;						ρ H			~	ae: Murinae: Mus.	a: Euteleostomi;			Ď,				
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1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60